CATEYE STEALTH 50

CYCLOCOMPUTER CC-GL50

ENG

Instruction manual

Before using the computer, please thoroughly read this manual and keep it for future reference.

* This PDF contains a link to YouTube.
  When you click on the button “Watch a video”, a message regarding security appears.
  Click the “Allow” to open a browser and play the video.
* YouTube videos and instruction manuals related to this product are subject to change without notice.
  For the latest edition of the instruction manual (PDF), visit the official CatEye website.
* This manual has been prepared on the assumption that the user has sufficient basic knowledge, including operation and terminology of PCs (Windows / Mac).

Features of this unit

Measurement method

This unit is a multifunctional cyclocomputer, having a GPS and an acceleration sensor built-in, which can perform measurement by receiving only the GPS signal. It can also measure up to 4 types of data (Speed, Cadence, Heart rate and Power) by receiving the signal of sensors compatible with ANT+ communication standards.

* This product does not contain an ANT+ sensor. Purchase the optional or commercial ANT+ sensor in accordance with your intended use.

Recording and viewing the trip route

Position information from GPS is recorded with measurement data during measurement. The measurement data such as your route and altitude can be viewed as a trip on a map on the site, by loading them into the dedicated software application “CATEYE Sync™” on your PC, and then uploading to the special website “CATEYE Atlas™”. “CATEYE Atlas™” can be used as a database for your cycling life, where you can store the trips measured using this unit or CATEYE INOU, a trip recorder with camera.

This device complies with Part 15 of the FCC Rules and Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
L’appareil est conforme à la réglementation FCC, section 15 et Industrie Canada RSS standard exempts de licence (s). Son utilisation est soumise à deux conditions :
1. L’appareil ne doit pas provoquer d’interférences nuisibles, et
2. L’appareil doit supporter les interférences reçues, y compris les interférences empêchant son fonctionnement correct.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by CatEye Co., Ltd. may void the user ’s authority to operate the equipment.
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help.
This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Proper use of the CatEye STEALTH 50

⚠ Warning / Caution

- Do not concentrate on the computer while riding. Ride safely!
- Mount firmly the bracket on your bicycle, and check periodically that it is not loosened.
- Do not leave the computer in direct sunlight for a long period of time.
- Do not disassemble the computer.
- Do not drop the computer to avoid malfunction or damage.
- Be sure to tighten the dial of the FlexTight™ bracket by hand. Tightening it strongly using a tool, etc. may damage the screw thread.
- When cleaning the computer and bracket, do not use thinners, benzene, or alcohol.
- LCD screen may be distorted when viewed through polarized sunglass lenses.

Cautions when measuring

Press and hold the **MODE** button to reset the computer before and after measurement. Measuring starts by resetting the computer. The unit keeps recording the trip until it is reset. Turn off the unit when not in use.

ANT+ sensor (optional or commercial)

This unit can receive, measure and display the signal from the following 4 ANT+ sensors.

- Speed sensor
- Speed/cadence (ISC) sensor
- Cadence sensor

* Heart rate sensor

- Power sensor

* For each type of sensor, you can perform pairing with up to 2 sensors.

* We offer an optional speed/cadence sensor (ISC-11), and heart rate sensor (HR-11).

* You can view applicable sensors on our website.

Measurement using the ANT+ speed sensor and the GPS signal

For speed measurement, the speed can be calculated from the GPS signal, even if you do not have the ANT+ speed sensor. When the speed signal from the ANT+ sensor is detected, priority is given to the speed signal for measurement. The difference between the measurement using the ANT+ speed sensor and that using the GPS signal is as follows.

	Measurement using the GPS signal	Measurement using the ANT+ speed sensor
Under measurement	The unit may stop measurement or may not display appropriate measurements when the GPS signal cannot be received due to locations or environments while riding.	Accurate measurement can be performed even in such locations or environments where the GPS signal cannot be received.
Measurement results	The measurement results may differ slightly from the actual value.	Highly reliable measurement values can be obtained, since they are based on wheel rotations.

* For GPS, see “GPS” (page 3).

ANT+ communication standards

ANT+ is low-power-consumption digital communication standards using frequency of 2.4GHz. It practically prevents external noises and cross talks from interfering with measurement, and enables to record and store more reliable data than before.
However, it suffers interference in the following places and/or environments, which may result in an incorrect measurement.

* Be careful especially while pairing (i.e., searching the sensor ID).

- Near TVs, PCs, radios, motors, or in cars or trains.
- Near railroad crossings, along railway tracks, around television transmitting stations and radar bases, etc.
- When using together with other wireless devices, or some particular battery lights.
- Under the Wi-Fi environment

Automatic recognition of the sensor ID

The ANT+ sensor has its own ID, and the computer measures in synchronization with the ID. 2 sensor IDs per sensor type can be registered into the computer. By pairing in advance, the sensor is automatically recognized while riding. It is not necessary to change the tire circumference manually, since the tire circumference is set for the speed sensor or speed/cadence (ISC) sensor ID.

* The speed sensor or speed/cadence (ISC) sensor, whichever is recognized, is indicated by the speed sensor icon (1, 2) on the display.

Procedure of automatic recognition
The computer automatically recognizes the sensor ID according to the following procedure.

❶ Signals from each sensor (speed, speed/cadence, cadence, heart rate, and power) are searched at the time when the GPS search screen displayed when the power is turned on, or the standby screen is changed to the measurement screen.

> ⚠ **Caution: Any sensor that is not sending the sensor signal at this time cannot be recognized. Each sensor sends the sensor signal in response to the following operations.**

Sensor type	Method
Speed sensor	Move the magnet close to the sensor zone (at a distance of less than 3 mm)
Speed/cadence (ISC) sensor * When using the CATEYE speed/cadence sensor (ISC-11), select [**ISC**] to perform paring.	
Cadence sensor	
Heart rate sensor	Wear the heart rate sensor
Power sensor	Ride the bicycle lightly

❷ Among the pairing-performed IDs of each sensor, the sensor with the strongest signal is received. The sensor signal icon corresponding to the received sensor appears on the display, and measurement is started. Each sensor is displayed as follows.

Sensor type	Display
Speed sensor	**S**
Speed/cadence (ISC) sensor	**S** and **C** flash simultaneously
Cadence sensor	**C**
Heart rate sensor	**H**
Power sensor	**P**

* The computer performs measurement using the GPS signal when the speed signal from the speed sensor or speed/cadence (ISC) sensor cannot be received. In such a case, the computer changes to measurement using the speed sensor whenever the speed signal is detected.
* When the cadence signal, heart rate signal, or power signal cannot be received, the relevant measurement value is not displayed.

GPS

GPS (Global Positioning System) is a system to identify the current position on the earth by receiving highly precise positional information sent from a satellite.

Receiving the GPS signal

- It may take several minutes to acquire the GPS signal after turning on the computer.
- While searching the GPS signal, we recommend that you do not move around until receiving the GPS signal. It may take more time to receive the GPS signal if you move around while searching the GPS signal.
- Receiving the GPS signal becomes easier under such conditions that the sky is open and the prospect for the satellites is good.

Where the GPS signal cannot be received

The unit may stop measurement or may not display appropriate measurements when the GPS signal cannot be received in the following locations or environments.

- In a tunnel, underground and building, between high-rise buildings, under an elevated structure and arcade, etc.
- In bad weather (snow, rain, etc.)
- Near a high-voltage line or a mobile telephone relay station.
- When the computer display does not face to the sky.

* The measurement results may differ slightly from the actual values, when the speed is calculated based on the GPS signal.

Battery

Follow these instructions to maximize the lithium-ion battery performance.

Recharge the battery for first time use or after long period of storage

Each battery has a rate of self-discharge and the voltage of the battery may drop during long period of storage. Always fully charge the battery before use.

Cautions on recharging

- Charge the battery at ambient temperature between 41°F to 104°F (5°C to 40°C).
- Be sure to unplug the USB plug after charging is completed.
- Clean the USB plugs before charging.
- Do not apply vibration during charging.
- When the connected PC is in sleep state, the battery cannot be charged.

Cautions in use

- Charging, discharging and storing at high temperature will damage the battery. Do not leave the battery in a car or near a heater.
- When the lighting time decreases significantly even though it is charged correctly, the rechargeable battery has reached the end of its usable life due to deterioration. For details, see “How to replace the battery / How to dispose the computer” (page 38).

Cautions on storage

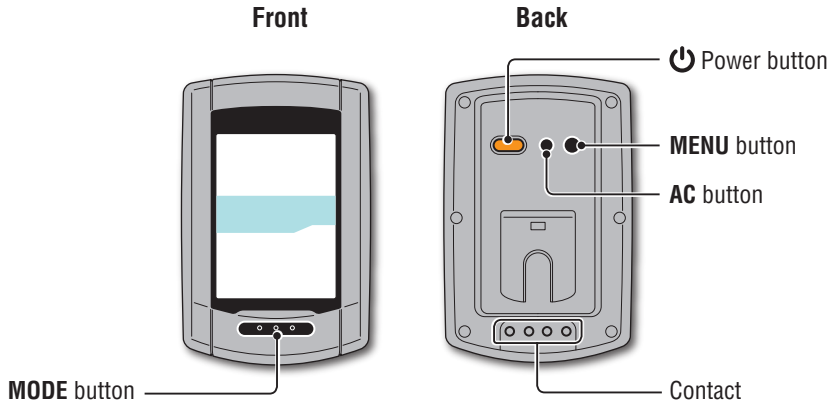
Do not store the Li-Ion battery after a full charge. Cool and dry storage is recommended.
For a long period storage, it is important to charge the battery 10 minutes every 6 months.

Cautions for dispose

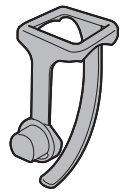
Remove the rechargeable battery inside, before disposing the computer.
For information on how to replace and dispose the battery, see “How to dispose the computer” (page 38).

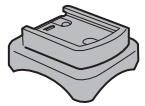
Description of computer and its parts

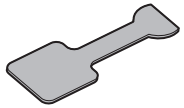
Computer



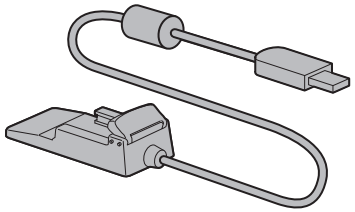
Accessories


Bracket band


Bracket

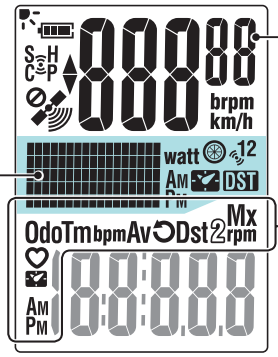

Bracket rubber pad

Dial


Cradle

Quick start
Yellow card

Screen display



Current speed
0.0 (3.0) – 105.9 km/h
[0.0 (2.0) – 65.9 m/h]

Dot display
Displays the clock. However, displays the power (wattage) when the power signal is received.

Selected data icon
Indicates the data displayed on the lower display.

Icon	Description
	Battery icon Displays the remaining battery capacity in 5 levels. * For information on how to charge the battery, see “How to turn on/off the power / how to charge the battery” (page 7).
	(Light up) Remaining battery capacity is large ↕ Remaining battery capacity is small
	(Flash) Remaining battery capacity is nearly zero. In such case, the computer turns off the power automatically. Charge the battery as soon as possible.
	Sensor signal icon Flashes when the ANT+ sensor signal is received.
	S (Flash) *1 When the speed signal is received
	C (Flash) *1 When the cadence signal is received
	H (Flash) When the heart rate signal is received
	P (Flash) When the power signal is received
	*1 : When the signal from the speed/cadence (ISC) sensor is received, **S** and **C** flash simultaneously.

Icon	Description
▲▼	**Pace arrow** Indicates if the current speed is faster or slower than the average speed. (▲ Faster, ▼ Slower)
	GPS signal receiving icon Indicates the GPS signal receiving status
	(Light up) GPS signal is strong ↕ GPS signal is weak
	GPS signal non-receiving icon Flashes when GPS signal cannot be received. In such status, measurement cannot be performed. * When such status lasts for 10 minutes, the computer turns off the power automatically. (Auto power off)
km/h m/h	**Speed unit** Flashes during measurement.
1 2	**Speed sensor icon** Indicates the speed sensor or speed/cadence (ISC) sensor being received.
watt	**Power unit**
	Tire circumference icon Lights up when the tire circumference is entered.
	Clock icon Lights up when the clock is displayed.
DST	**Daylight saving time icon** * For information on how to set the daylight saving time, see “Changing the computer configuration” (page 27).

How to install the unit on your bicycle

Watch video (YouTube)

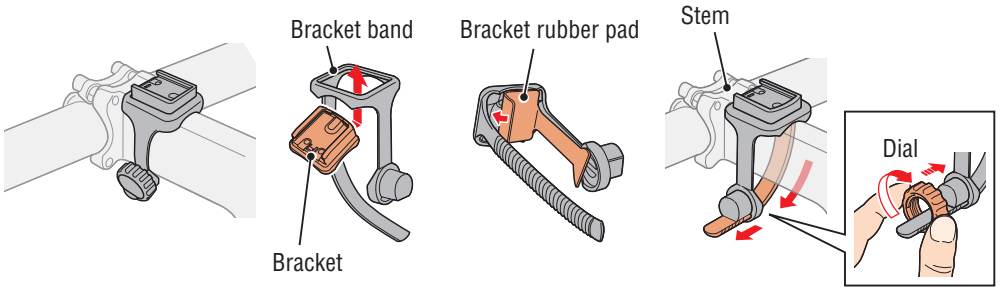
Click the button, then a browser will open and a video will be played back.

Attach the bracket to the stem or handlebar

The FlexTight™ bracket can be attached to either the stem or the handlebar, depending on how the bracket fits into the bracket band.

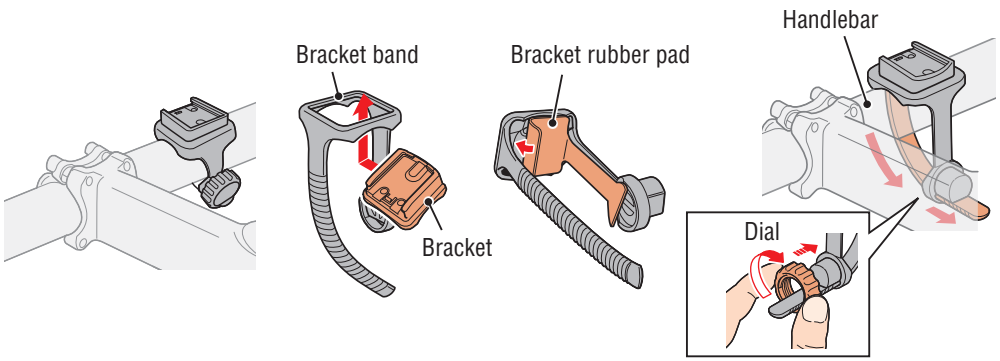
⚠ **Caution: Be sure to tighten the dial of the FlexTight™ bracket by hand. Tightening it strongly using a tool, etc. may damage the screw thread.**

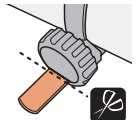
When attaching the FlexTight™ bracket to the stem



When attaching the FlexTight™ bracket to the handlebar

* To receive GPS signal effectively, adjust the direction of the bracket so that the computer display faces to the sky.



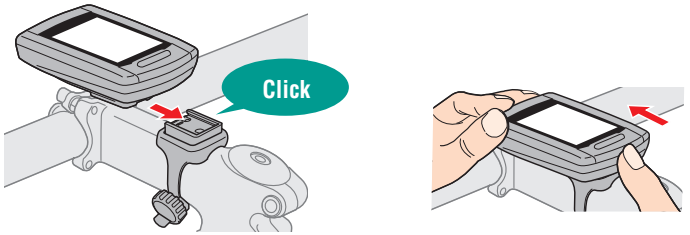


Cut the excess length of the band using scissors.

⚠ **Caution: Round off the cut edge of the bracket strap to prevent injury.**

* To mount the bracket to an aero-shaped handlebar or larger stem, use the optional nylon ties bracket.

Remove/Install the computer



⚠ **Caution: When removing, hold the unit to prevent it from falling.**

When you have the ANT+ sensor

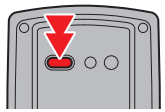
Mount the sensor according to the instruction manual of each sensor.

* For information on how to install the optional speed/cadence sensor (ISC-11), see “How to install the speed/cadence sensor (ISC-11)” (page 39).
* For information on how to wear the optional heart rate sensor (HR-11), see “How to install the heart rate sensor (HR-11)” (page 40).

How to turn on/off the power / how to charge the battery

Power ON/OFF

(press & hold)



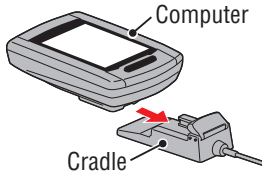
Press and hold the ⏻ button on the back of the computer for 2 seconds.

* Set up the computer when you turn on the power for the first time. For details, see “Setting up the computer” (on the right of this page).
* When the remaining battery capacity is small, charge it according to the following instructions.

How to charge

1 Set the computer to the cradle

⚠ **Caution: Do not set wet computer to the cradle, for example after ride in the rain. It may cause short circuit and damage the computer or the data.**



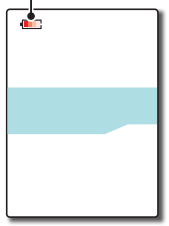
2 Insert the USB plug in your PC or a commercial USB battery charger

Once charging is started, only (battery icon) is displayed.

Icon	Description
(Animation)	Charging
(Light up)	Charging is completed

* When the computer is connected to your PC, the battery cannot be charged with the PC in sleep state.
* With USB1.0, it takes time to charge.
* The battery charges to about 80% after approximately 90 minutes
* The standard charging time may change according to the environment for use.
* The computer can be used for 10 hours on a full charge.

Battery icon

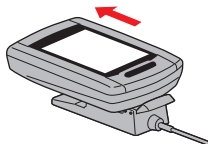


Standard charging time Approx. 5 h

3 Remove the computer after charging is completed

Disconnect the USB plug from your PC or a USB battery charger, and then remove the computer from the cradle.

* To remove the computer, press it out by hand while holding the cradle.



Setting up the computer

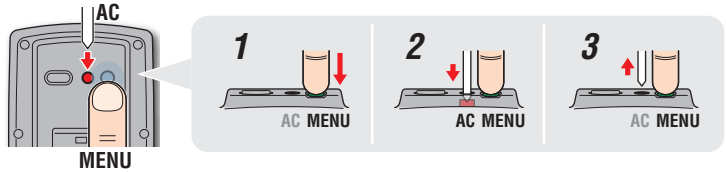
Perform the following formatting operation, when you use the unit for the first time or restore the unit to the condition before shipment.

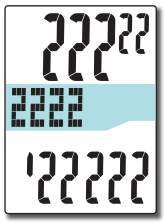
⚠ **Caution: All data are deleted, and the computer is reset to the factory default.**

* Complete setting up the computer without modification, even if you make a mistake in entering or fail in pairing (*1) with any sensor while setting up the computer. You can change the setting later, from the dedicated application “CATEYE Sync™” or from the menu screen of the computer.
  For details, see “Changing the computer configuration” (page 27).
  *1: Pairing can be performed only from the menu screen of the computer.
  For details, see “Pairing the sensor” on the menu screen (page 32).

1 Format (initialize)

Press the **MENU** button on the back of the computer and the **AC** button simultaneously. Release the **MENU** button when a test pattern is displayed on the screen.





Test pattern

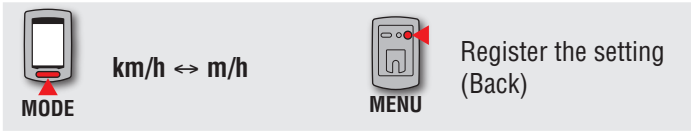
* When all screen items light up without any test pattern displayed on the screen, the formatting operation has not been completed properly. Perform the formatting operation again.

Watch video (YouTube)

Click the button, then a browser will open and a video will be played back.

2 Select the speed unit

Select “**km/h**” or “**m/h**”.



3 Pairing (Searching the sensor ID)

When you do not have the ANT+ sensor
"Pairing" is not required. Press the **MENU** button 5 times to jump to Step 5 "Select the time zone" (page 11).

When you have the ANT+ sensor
In order for the computer to recognize each sensor, it is necessary to register the sensor ID of each sensor (pairing). Perform pairing of the computer with your ANT+ sensor according to the following procedure.

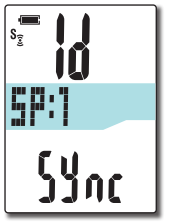
This unit has 2 different methods for pairing.

How to search the sensor ID	Description
Automatic search	The computer completes pairing by receiving the signal sent from the sensor. * Generally, use this method for pairing.
Manual ID number entry	When the sensor ID number is known, you can perform pairing by entering the number. * Use this method for pairing, when there are two or more ANT+ sensors, such as at a race site, and automatic search cannot be done.

1 Display the sensor for pairing, on the display
Pressing the **MENU** button changes the sensor for pairing. Display your sensor.

MENU
(Back)

SP:1 (Speed sensor)
↓
ISC:1 (Speed/cadence sensor)
↓
CD:1 (Cadence sensor)
↓
HR:1 (Heart rate sensor)
↓
PW:1 (Power sensor)



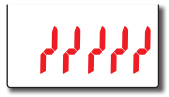
* While setting up the computer, sensor pairing is performed in the order shown in the figure. Complete setting up of the computer, even if you fail or skip pairing. You can change the setting later. For details, see "Pairing the sensor" on the menu screen (page 32).
* By default, you can perform pairing with either "**SP:1**" or "**ISC:1**".
  - When you perform pairing with "**SP:1**", the display of "**ISC:1**" (speed/cadence sensor) is skipped.
  - When you perform pairing with "**ISC:1**" (speed/cadence sensor), the display of "**CD:1**" (cadence sensor) is skipped.

② Pairing is started

In the case of automatic search

Press and hold the **MODE** button, then the lower display will be changed and automatic search will be started.

Automatic search is started (press & hold)



Automatic search is started

* When another ANT+ sensor is nearby, send the sensor signal of the sensor to be searched, and then press and hold the **MODE** button. It can be easier to pair with the sensor you want.

Send the sensor signal with the automatic search screen displayed.

* Note the ID number for your convenience, which is specific to the sensor.

Searching the sensor ID is completed

* Each sensor sends the sensor signal in response to the following operations.

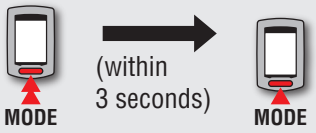
Sensor type		Method
SP	Speed sensor	Move the magnet close to the sensor zone (at a distance of less than 3 mm)
ISC	Speed/cadence sensor * When using the CAT-EYE speed/cadence sensor (ISC-11), select [**ISC**] to perform paring.	
CD	Cadence sensor	
HR	Heart rate sensor	Wear the heart rate sensor
PW	Power sensor	Ride the bicycle

* The computer enters the search mode for 5 minutes after automatic search is started. Send the sensor signal in this period.

* Pressing and holding the **MODE** button in the search mode cancels automatic search. It is canceled automatically when the sensor signal cannot be received in the search mode.

In the case of manual ID number entry

Press and hold the **MODE** button to start automatic search, and then press the **MODE** button within 3 seconds.
The display will be changed to the ID number entry screen.

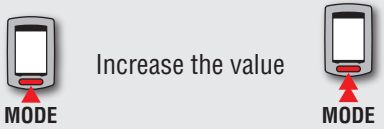


Changes to the ID number entry screen

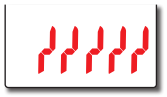
* Note that it will enter into automatic search when a time of 3 seconds or more elapses.

Pressing the **MODE** button changes the value, and pressing and holding the **MODE** button moves to the next digit.

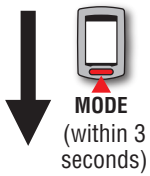
Setting range: 00001 – 65535



Go to Step ③.



Automatic search is started



Automatic search screen

ID number entry screen

❸ **Check the ID number, and then press the MENU button**
Sensor pairing is completed.

Register the setting
(Back)

❹ **Perform pairing for other sensors with the same procedure**

4 Enter the tire circumference

When you skip pairing with the ANT+ speed sensor or speed/cadence (ISC) sensor
Setting in “Entering the tire circumference” is skipped.

Go to Step 5 “Select the time zone” (page 11).

When you perform pairing with the ANT+ speed sensor or speed/cadence (ISC) sensor
Enter the tire circumference (outer perimeter of tire) on the side where the sensor is mounted, in mm, according to the following procedure.

Pressing the **MODE** button changes the value, and pressing and holding the **MODE** button moves to the next digit.

Setting range: 0100 - 3999 mm

Increase the value

Move digits
(press & hold)

Register the setting
(Back)

* For determining the tire circumference, see “Tire circumference” (on the right of this page).

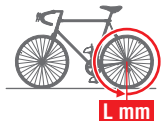
Tire circumference

You can find the tire circumference (L) of your tire size in the chart below, or actually measure the tire circumference (L) of your bicycle.

How to measure the tire circumference (L)
For the most accurate measurement, do a wheel roll out. With the tires under proper pressure, place the valve stem at the bottom. Mark the spot on the floor and with the rider’s weight on the bike, roll exactly one wheel revolution in a straight line (until the valve comes around again to the bottom). Mark where the valve stem is and measure the distance.

* Measure the tire to which the sensor is installed.

or



Tire circumference reference table
* Generally, the tire size or ETRTO is indicated on the side of the tire.

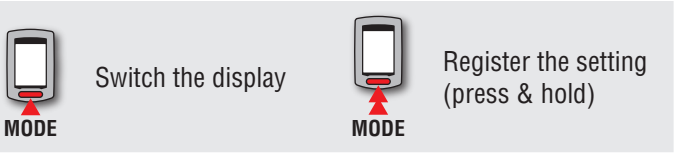
ETRTO	Tire size	L (mm)
47-203	12x1.75	935
54-203	12x1.95	940
40-254	14x1.50	1020
47-254	14x1.75	1055
40-305	16x1.50	1185
47-305	16x1.75	1195
54-305	16x2.00	1245
28-349	16x1-1/8	1290
37-349	16x1-3/8	1300
32-369	17x1-1/4(369)	1340
40-355	18x1.50	1340
47-355	18x1.75	1350
32-406	20x1.25	1450
35-406	20x1.35	1460
40-406	20x1.50	1490
47-406	20x1.75	1515
50-406	20x1.95	1565
28-451	20x1-1/8	1545
37-451	20x1-3/8	1615
37-501	22x1-3/8	1770
40-501	22x1-1/2	1785
47-507	24x1.75	1890
50-507	24x2.00	1925
54-507	24x2.125	1965

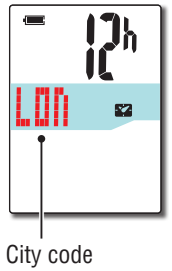
ETRTO	Tire size	L (mm)
25-520	24x1(520)	1753
	24x3/4 Tubular	1785
28-540	24x1-1/8	1795
32-540	24x1-1/4	1905
25-559	26x1(559)	1913
32-559	26x1.25	1950
37-559	26x1.40	2005
40-559	26x1.50	2010
47-559	26x1.75	2023
50-559	26x1.95	2050
54-559	26x2.10	2068
57-559	26x2.125	2070
58-559	26x2.35	2083
75-559	26x3.00	2170
28-590	26x1-1/8	1970
37-590	26x1-3/8	2068
37-584	26x1-1/2	2100
	650C Tubular 26x7/8	1920
20-571	650x20C	1938
23-571	650x23C	1944
25-571	650x25C 26x1(571)	1952

ETRTO	Tire size	L (mm)
40-590	650x38A	2125
40-584	650x38B	2105
25-630	27x1(630)	2145
28-630	27x1-1/8	2155
32-630	27x1-1/4	2161
37-630	27x1-3/8	2169
18-622	700x18C	2070
19-622	700x19C	2080
20-622	700x20C	2086
23-622	**700x23C**	**2096**
25-622	700x25C	2105
28-622	700x28C	2136
30-622	700x30C	2146
32-622	700x32C	2155
	700C Tubular	2130
35-622	700x35C	2168
38-622	700x38C	2180
40-622	700x40C	2200
42-622	700x42C	2224
44-622	700x44C	2235
45-622	700x45C	2242
47-622	700x47C	2268
54-622	29x2.1	2288
60-622	29x2.3	2326

5 Select the time zone

In reference to the following “Time zone list”, select the code for the city nearest from your current location.

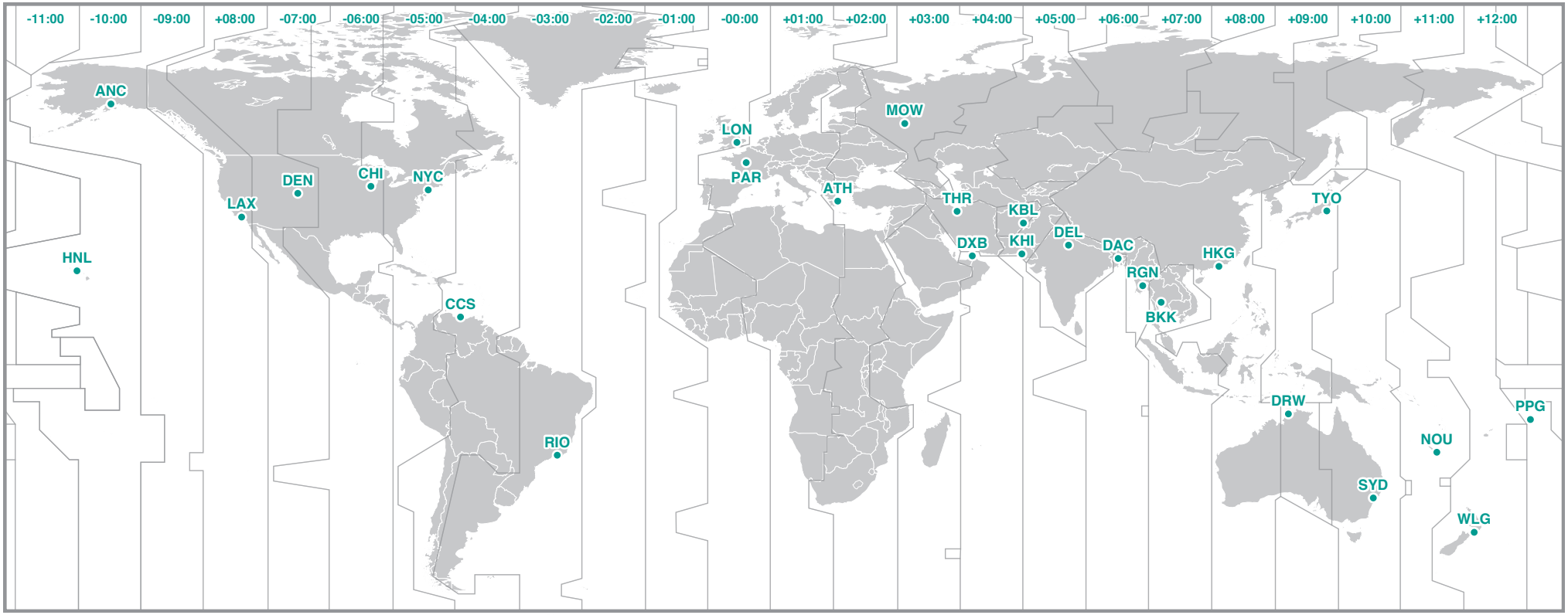




Time zone list

City code	City name	Time difference
LON	London	0
PAR	Paris	+1
ATH	Athens	+2
MOW	Moscow	+3
THR	Tehran	+3.5
DXB	Dubai	+4
KBL	Kabul	+4.5
KHI	Karachi	+5
DEL	Delhi	+5.5
DAC	Dhaka	+6
RGN	Yangon	+6.5
BKK	Bangkok	+7
HKG	Hong Kong	+8
TYO	Tokyo	+9

City code	City name	Time difference
DRW	Darwin	+9.5
SYD	Sydney	+10
NOU	Noumea	+11
WLG	Wellington	+12
PPG	Pago Pago	-11
HNL	Honolulu	-10
ANC	Anchorage	-9
LAX	Los Angeles	-8
DEN	Denver	-7
CHI	Chicago	-6
NYC	New York	-5
CCS	Caracas	-4
RIO	Rio de Janeiro	-3



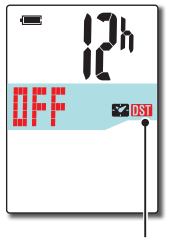
6 Select the daylight saving time

You can set the daylight saving time when you are on Daylight Saving Time.
Select ON or OFF.

Setting	Description
ON	Moves the clock 1 hour ahead
OFF	Displays in regular clock

ON ↔ OFF

Register the setting (press & hold)



Daylight saving time icon

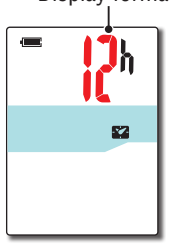
* Change ON/OFF according to the period of daylight saving time.

7 Select the clock display format

Select the display format of "**12h**" (12 hours display) or "**24h**" (24 hours display).

12h ↔ 24h

Display format



* Date and clock are acquired from GPS signal; therefore, it is not necessary to enter them.

8 Press the MENU button to complete setting

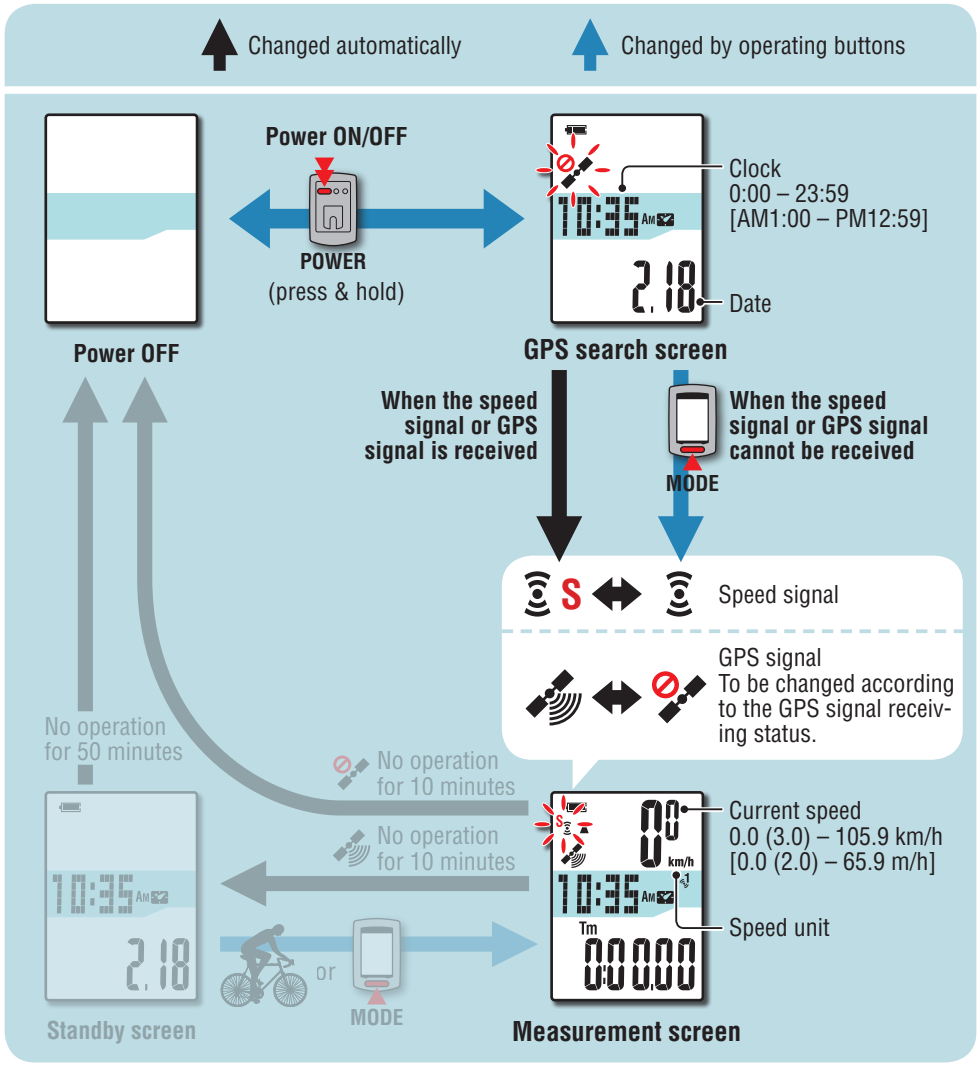
Setting up is completed, and the computer changes to the GPS search screen.

Complete setting up (Back)

Now, setting up the computer is completed.
For information on how to use the computer, see "How to use the computer" (page 13).

How to use the computer

This unit is a cyclocomputer, having a GPS and an ANT+ signal receiver built-in. When the ANT+ speed sensor is not used, it can be used as a cyclocomputer using only the GPS signal; however, measurement cannot be done in an environment where the GPS signal cannot be received. This unit has 3 screens (GPS search screen, measurement screen, and standby screen) which are displayed alternatively according to the speed signal and/or GPS signal receiving status and the bicycle motion status. This section describes the flow of the screen after the power is turned on until measurement is started.



GPS search screen (when the power is turned on)

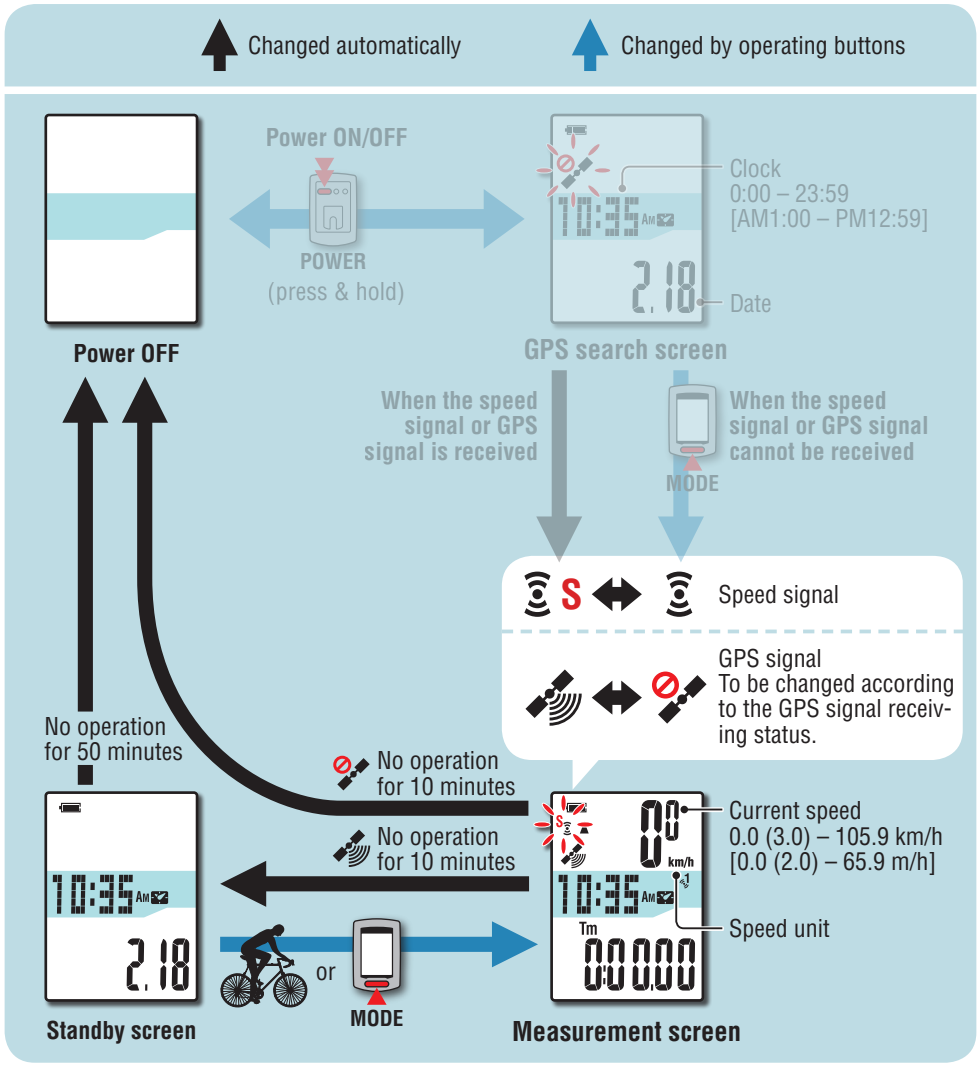
When the power is turned on, the GPS search screen will appear, and the GPS signal non-receiving icon ( ) will flash. Once the speed signal is received, the speed sensor signal icon (S) will flash, whereas once the GPS signal is received, the GPS signal receiving icon ( ) will light up, and the display will be changed to the measurement screen.

* In an environment where the speed signal or GPS signal cannot be received, you can change to the measurement screen by pressing the **MODE** button even while either signal is not received.
* This unit starts searching the speed signal and GPS signal after the power is turned on. It may take several minutes to acquire the signal depending on the receiving status.

Measurement screen

This is the basic screen of this unit. This screen is used during measurement. Your can start/stop measurement and view the data under measurement. Depending on the speed signal and GPS signal receiving status, the computer operates in a different way as follows.

Display icon		Measurement	Viewing the measurement data, and resetting operation	Recording the trip route
S (Flash)	When the speed signal is received	OK	OK	OK
(Light up)	When the GPS signal is received			
S (Flash)	When the speed signal is received	OK	OK	NO
(Flash)	When the GPS signal is not received			
S (Light off)	When the speed signal is not received	OK	OK	OK
(Light up)	When the GPS signal is received			
S (Light off)	When the speed signal is not received	NO	OK	NO
(Flash)	When the GPS signal is not received			



* For information on how to start/stop measurement, view the measurement data, and about resetting operation, see “Functions available on the measurement screen” (page 15).
* The recorded trip route can be viewed by uploading the trip to CATEYE Atlas™. For details, see “Uploading the measurement data (trip data)” (page 20).
* When the speed sensor or speed/cadence (ISC) sensor is not used, measurement will stop if the GPS signal cannot be received.
* The unit will be automatically turned off in 10 minutes if no speed signal or GPS signal is received, and no button is pressed. (Auto power off)

GPS signal may not be received, thus the unit may stop measurement or may not display appropriate measurements in the following locations or environments.

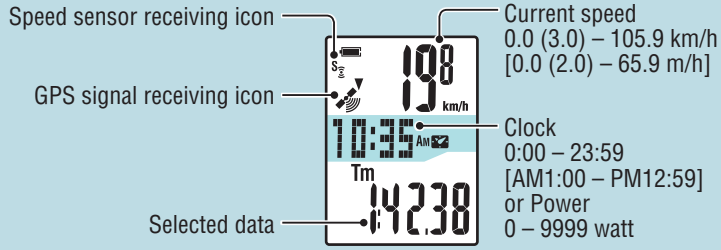
- In a tunnel, underground and building, between high-rise buildings, under an elevated structure and arcade, etc.
- In bad weather (snow, rain, etc.)
- Near a high-voltage line or a mobile telephone relay station.
- When the computer display does not face to the sky.

Standby screen

The display will be automatically changed to the standby screen in 10 minutes if there is no bicycle motion or button operation while receiving the speed signal or GPS signal with the measurement screen. Riding again returns to the measurement screen.

* The unit turns off the power automatically in 50 minutes with the standby screen displayed. (Auto power off)
* When the GPS signal cannot be received with the standby screen displayed, the GPS signal non-receiving icon ( ) flashes. When the speed signal cannot be received, even riding again does not return to the measurement screen.

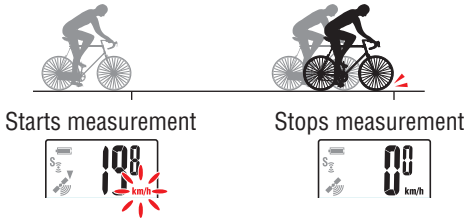
Functions available on the measurement screen



Starting/Stopping measurement

⚠ **Caution: Press and hold the MODE button to reset the computer before and after measurement.**
Measuring starts by resetting the computer. The unit keeps recording the trip until it is reset. Turn off the unit when not in use.

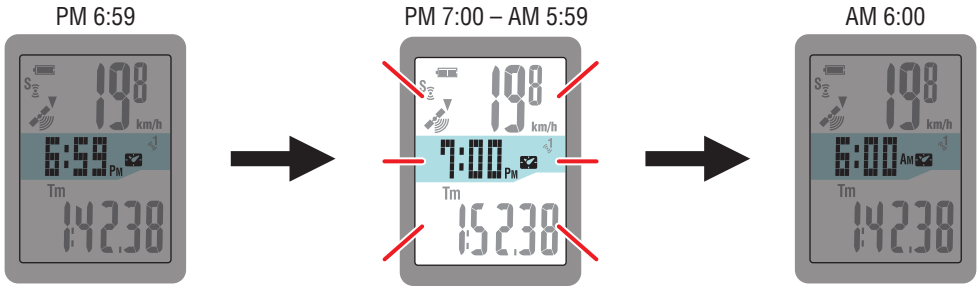
Measurement starts/stops in sync with the bicycle motion when the speed sensor signal icon (S) flashes, or the GPS signal receiving icon lights up. The speed unit flashes during measurement.



Backlight

When using it during night-time, the backlight always lights up.

Example: Setting of the night-time: 7:00 PM to 6:00 AM

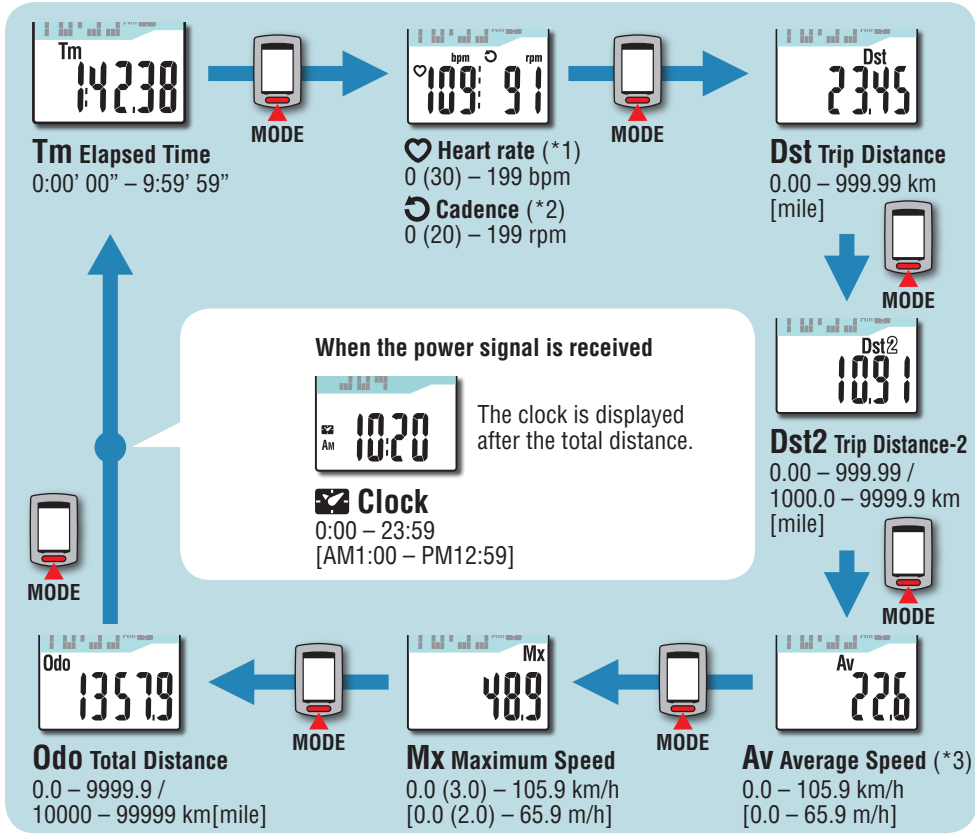


* The night-time can be set to your needs. For information on how to set the night-time, see "Changing the computer configuration" (page 27).

* As default, it is set to 7:00 PM to 6:00 AM.

Switching computer function

Pressing the **MODE** button switches the measurement data in the lower display, in the order shown in the figure.

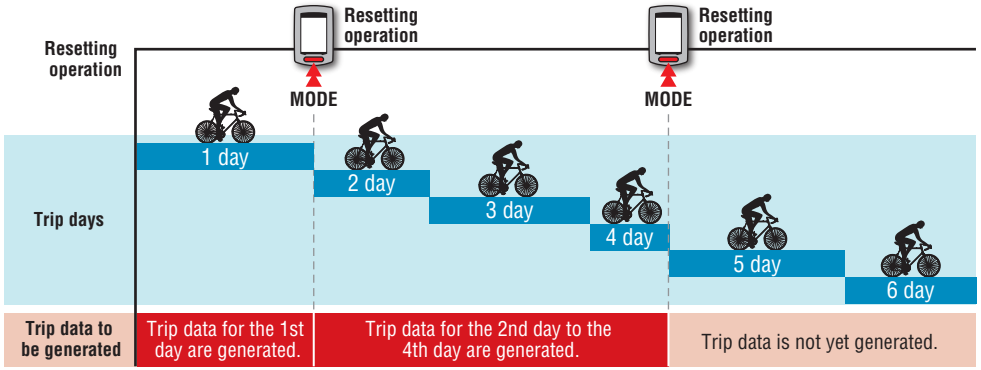


*1: When no cadence signal is received, 0 appears on the screen.
*2: When no heart rate signal is received, 0 appears on the screen.
*3: When **Tm** exceeds about 27 hours, or **Dst** exceeds 999.99 km, Average Speed cannot be measured, while displaying "**.E** ". Reset the data.

Resetting the measurement data and generating the trip data

Holding down the **MODE** button with the measurement screen displayed resets the measurement data to 0 (resetting operation). All the measurement data up to that time are generated as trip data. You can view measurement results and store trip records, by uploading the trip data to the special website "CATEYE Atlas™" via the dedicated software application "CATEYE Sync™".

MODE
(press & hold)



* A trip is continued unless the resetting operation is performed, even if the power is turned off during measurement.
* The trip distance-2 (**Dst2**) is not reset to 0, since it is to be reset separately. For details, see "Resetting the trip distance-2" below.
* The total distance (**Odo**) cannot be reset.
* For information on how to upload to the CATEYE Atlas™, see "Uploading the measurement data (trip data)" (page 20).
* The unit has a limited memory capacity. When the data volume exceeds the memory capacity, any new data can no longer be stored. For details, see "Record interval and capacity limit" (page 23).

Resetting the trip distance-2

Pressing and holding the **MODE** button with the trip distance-2 (**Dst2**) displayed resets only the trip distance-2 data to 0.

* The trip distance-2 (**Dst2**) value cannot be saved as trip data.

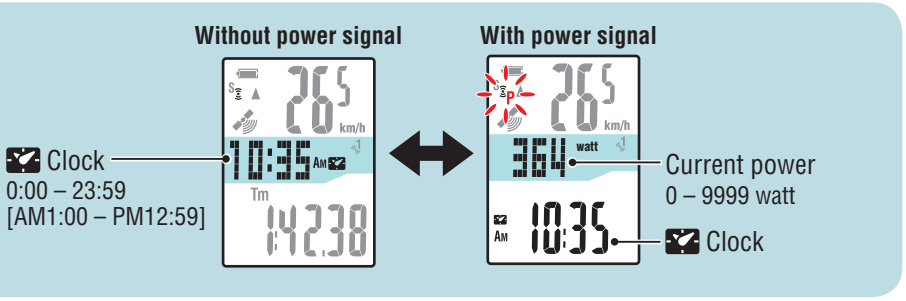
MODE
(press & hold)

Power measurement

This measurement is possible when you have the ANT+ power sensor.

When the power signal is received, the middle display in the measurement screen changes from clock to power.

* The clock display moves from the middle display to the lower display. For details, see “Switching computer function” (page 15)



Calibration of the power sensor

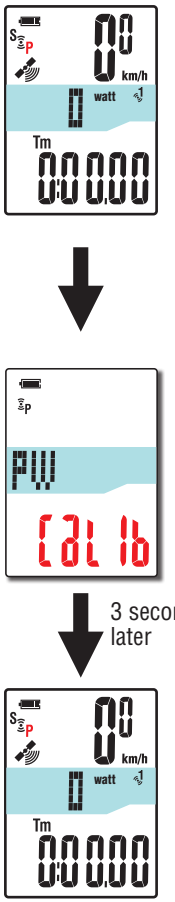
Continuous use of the power sensor may cause a slight drift in unloaded condition.
Calibrate it periodically to correct the drift.
Especially for critical measurements, we recommend you perform calibration in advance.

* Read the instruction manual of the power sensor, and check the precautions for calibration before you start calibration.
If you fail in calibration, accurate power measurement may not be performed.

1 Press and hold the MENU button for 4 seconds while measurement stops on the measurement screen

⚠ Caution: Be sure not to put a load on the power sensor accessories (crank, etc.) during calibration.

To the calibration screen
(press and hold for 4 sec.)



CALIB will flash on the display, and calibration will be started.

3 seconds later, calibration will be completed and the display will return to the measurement screen.

Setup of your PC

At first, access the special website CATEYE Atlas™ to register as a member. Then, install CATEYE Sync™ to your PC (Windows/Mac). You can upload the trip data measured with this unit to CATEYE Atlas™, STRAVA™, TrainingPeaks™ and others, or change the computer configuration using your PC.

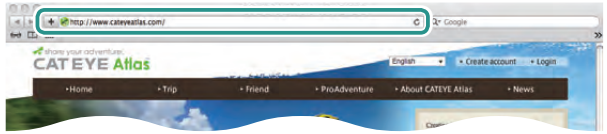
⚠ **Caution: Use the PC with an Internet access environment to access CATEYE Atlas™ or download CATEYE Sync™.**

Membership registration to CATEYE Atlas™

- You can use the same account when using CATEYE INOU and having registered membership.
- When uploading the trip data acquired with this unit only to STRAVA™ or TrainingPeaks™, membership registration of CATEYE Atlas™ is not required. Install CATEYE Sync™, and see “Uploading trip data” (page 20).

1 Access CATEYE Atlas™

Access the website “CATEYE Atlas™” from your browser (http://www.cateyeatlas.com).



2 Click on [Create account].

Register your temporary membership according to the instructions displayed on the screen.
Once you are registered, an e-mail is sent from CATEYE Atlas™.
Access to the specified URL to register your formal membership.

* Membership registration is free of charge.

* Make a note of your e-mail address, password and birth date registered, and be sure to keep it.

3 Click on [Login here].

4 Enter your e-mail address and password, and then click on [Login].

Enter correctly your e-mail address and password registered to login.

* Go to “Installing CATEYE Sync™” (on the right of this page).

Installing CATEYE Sync™

Operating environment for CATEYE Sync™

OS	Windows XP (32 bit), and Vista / 7 / 8 (32 bit / 64 bit) *.NET Framework 3.5 is required. Mac OS 10.6 or later
Memory	Recommend environment for respective OS
HDD	Available capacity required: 64 MB or more
Browser	Internet Explorer 7 or later, Safari 4.0 or later, Firefox, and Google Chrome 5.0 or later

How to Install CATEYE Sync™

1 Click on [Download CATEYE Sync™ now].

Download the file according to the instructions displayed on the screen.

2 Double click on the execution file downloaded.

OS	Execution file
For Windows	[setup.exe]
For Mac	[CATEYESyncSetUp.pkg]

* Administrator authority is required to run the program on Windows Vista / 7 / 8.

3 Perform an installation according to the instructions displayed on the screen.

Once installation is completed, CATEYE Sync™ will start.

* Go to “Setting CATEYE Sync™”(page 19).

Setting CATEYE Sync™

After installing CATEYE Sync™, configure the login setting for CATEYE Atlas™.

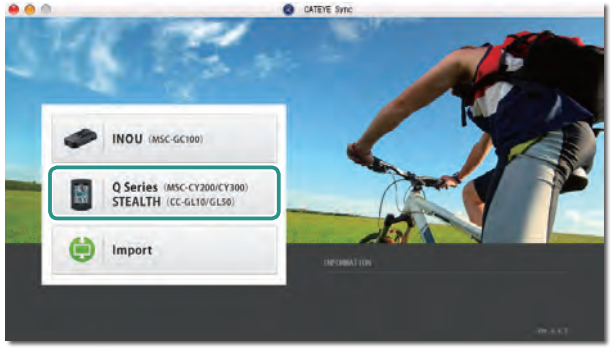
* When uploading the trip data only to STRAVA™ or TrainingPeaks™, the following setting is not required.

1 Start CATEYE Sync™.

Double-click on the shortcut [CATEYE Sync™] to start CATEYE Sync™.

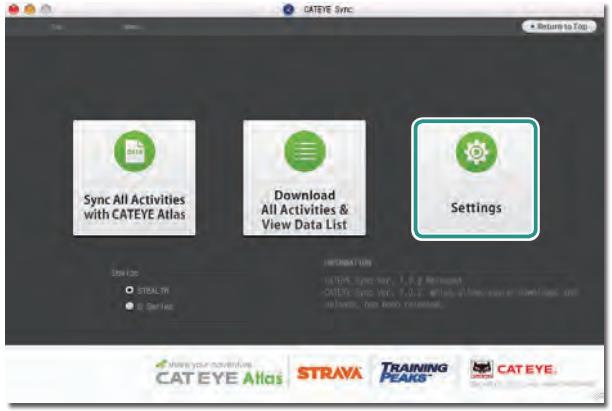
2 Click on [Q Series / STEALTH].

The menu screen appears.



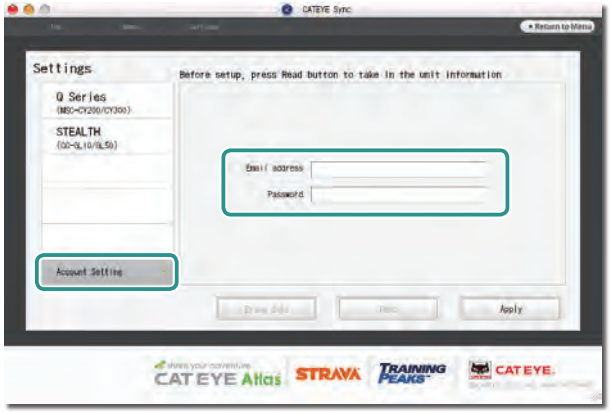
3 Click on [Settings].

The setting screen appears.



4 Click on [Account setting] and enter your e-mail address and password.

Enter correctly the e-mail address and password you registered at CATEYE Atlas™.



5 Click on [Apply].

Login setting for CATEYE Sync™ is completed.
Now, setup of your PC is completed.

* For information on how to upload the trip data, see “Uploading the measurement data (trip data)” (page 20).
* With CATEYE Sync™, you can synchronize the settings configured in “Setting up the computer” (page 7) with the computer (except for paring). For details, see “Changing the computer configuration” (page 27).
* When using CATEYE INOU, click on [INOU] to start INOU Sync. When you use CATEYE INOU for the first time, download CATEYE Sync™ INOU from CATEYE Atlas™ to install it.

Uploading the measurement data (trip data)

The trip data generated by the resetting operation can be uploaded to the special website CATEYE Atlas™ or other services (STRAVA™ and others) in the following procedure.

Uploading trip data

Save the trip data in the computer to your PC, and upload desired trip data to CATEYE Atlas™, STRAVA™, or TrainingPeaks™.

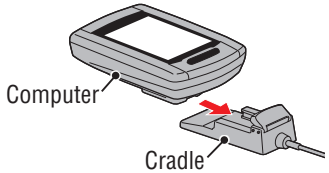
*** The trip data without the resetting operation cannot be recognized with CATEYE Sync™. Perform the resetting operation of the computer before setting to the cradle.**

Watch video (YouTube)

Click the button, then a browser will open and a video will be played back.

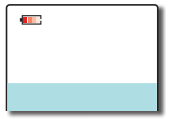
1 Set the computer to the cradle.

⚠ Caution: Do not set wet computer to the cradle, for example after ride in the rain. It may cause short circuit and damage the computer or the data.



2 Insert the USB plug into your PC.

Only (battery icon) is displayed on the screen.

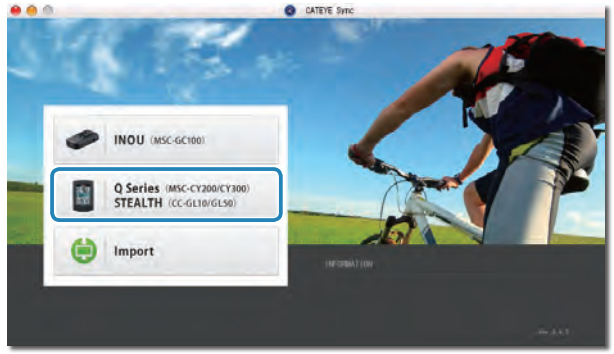


3 Start CATEYE Sync™.

Double-click on the shortcut [CATEYE Sync™] to start CATEYE Sync™.

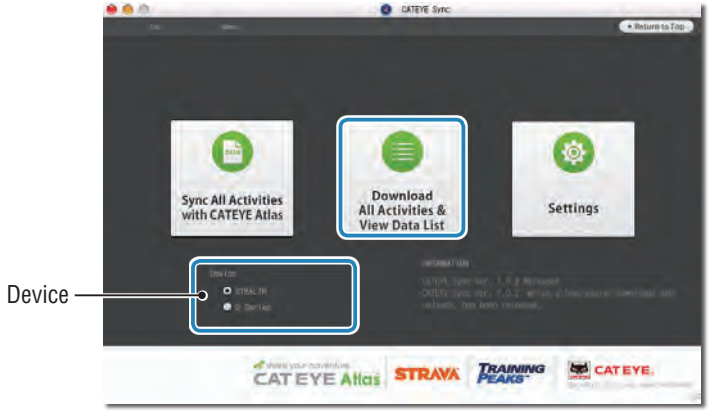
4 Click on [Q Series / STEALTH].

The menu screen appears.



5 Check that "STEALTH" is selected under Device, and click [Download All Activities & View Data List].

The trip data is downloaded from the computer to your PC, and the data list screen appears.

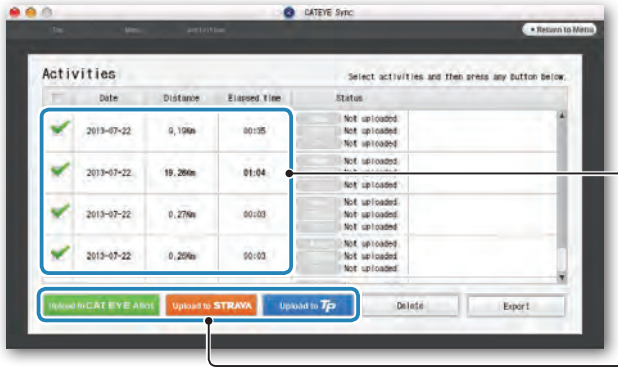


* Trip data successfully downloaded to your PC is deleted from the computer.

* Data under measurement that has not been reset cannot be read.

6 Check that the trip data you want to upload has been selected, and click the desired upload button.

Transferred trip data is displayed in the data list with a check mark.



The loaded trip data includes trips with a distance and time of 0. These trips are data created by the resetting operation before measurement.

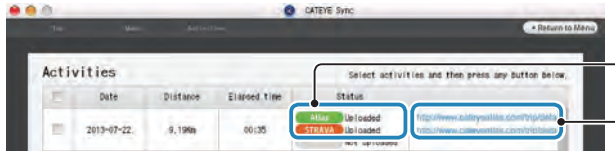
* For details, see “Starting/Stopping measurement” (page 15).

Clear the check box for any unnecessary trip data, and then click the upload button for the service site you want to upload the data to.

Upload button	Destination of uploaded trip data
Upload to CAT EYE Atlas	CATEYE Atlas™
Upload to STRAVA	STRAVA™
Upload to TP	TraingPeaks™

* You must have an account with the relevant site to upload data to STRAVA™ or TrainingPeaks™. Site authentication is required when uploading for the first time. After clicking the upload button, follow the on-screen instructions and enter the authentication code issued by the site.
* It may take time to upload depending on the trip data size and line condition.

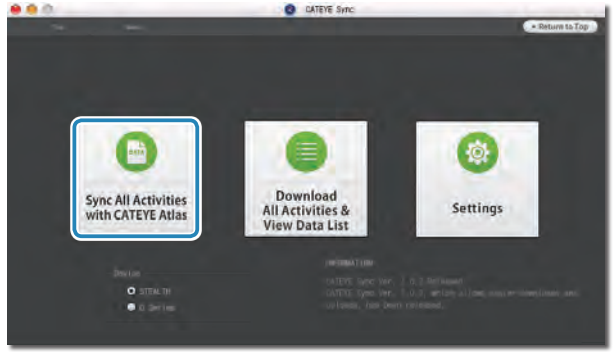
When the upload is complete, the sites to which the data was uploaded are indicated in the “Status” column and links to the trip are displayed in the adjacent column.



* Clicking the link launches your browser and displays the uploaded trip.

Syncing all activities

Clicking [Sync All Activities] lets you download trip data to your PC and upload trips to service sites with the click of a single button. Trip data is uploaded to the previous service site you used.



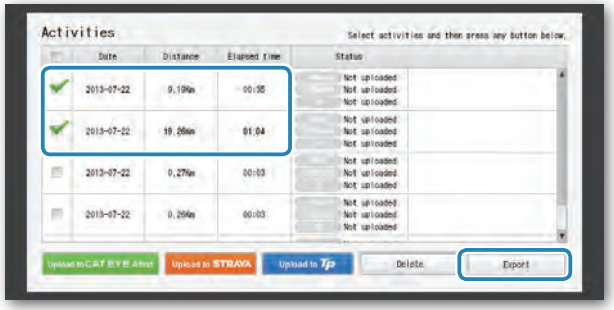
* You can check the upload destination by the color of the button. (Green: CATEYE Atlas™, Orange: STRAVA™, Blue: TrainingPeaks™)
* To upload specific trip data only or upload trip data to a service site other than the last one used, upload using the [Download All Activities & View Data List] button. For details, see Step 6 of “Uploading trip data” (on the left of this page).

Exporting the trip data

You can export the trip data saved in CATEYE Sync™, and create a file.

1 Check any trip data on the data list screen, and then click on [Export].

A dialog for selecting the file format appears.



* Selecting data for multiple trips lets you export several files at once.

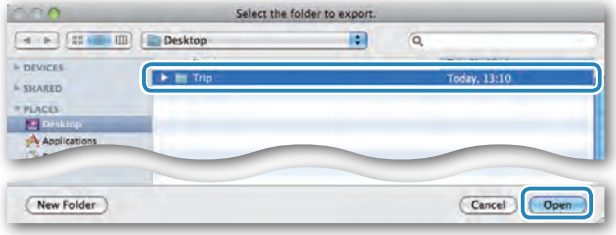
2 Click on the file format for export.

File format	Description
CATEYESync (.ces)	A file that can be read into CATEYE Sync™ * This can be used when transferring the trip data in the past to a new PC when renewing your PC.
.gpx	A general-purpose GPS data file * This can be used after reading into Google Earth™, etc.
.fit	A file that can be read into STRAVA™ and TrainingPeaks™

A window for selecting the destination to save appears.

3 Select the destination to save, and then click on [Open].

The file will be exported to the destination specified.



Importing the data of such as e-Train Data™ to CATEYE Sync™

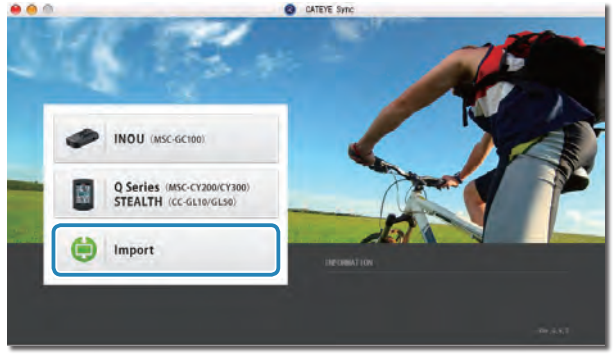
The measurement data loaded into e-Train Data™ can be used with CATEYE Atlas™ and other services (STRAVA™ etc.) by importing it to CATEYE Sync™.

1 Export the measurement data from e-Train Data™, and prepare a file.

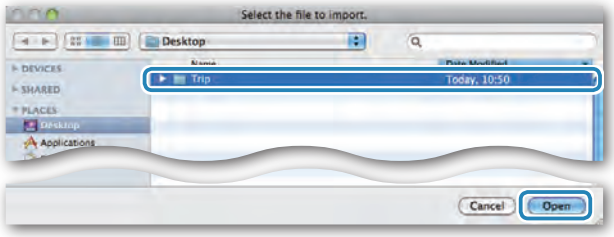
* For information on how to export e-Train Data™, see the instruction manual for e-Train Data™.

2 Click on [Import] on the top screen.

A window for selecting the file appears.



3 Select the file you want to load, and then click on [Open].



Compatible files	Description
.etd	e-Train Data™Ver.3/4 file
.csv	e-Train Data™Ver.2 file
.ces	CATEYE Sync file

* The CATEYE Sync file exported from another PC can also be loaded.
* The CSV files not created with e-Train Data™ Ver.2 cannot be imported.

The data list screen appears, and the selected file is added to the data list.

Trip data

Data contained in the trip data

Date and clock (date/time when the measurement started)

Elapsed time

Data recorded at the record interval specified
- Location information
- Trip distance
- Sea level altitude
- Current speed
- Cadence *1
- Heart rate *1
- Power *1

*1 : These are measured when using an ANT+ compatible sensor.

Record interval and capacity limit

This unit records data at the specified interval. The record interval can be selected from 1, 2 or 5 seconds according to your use (Default: 1 second).
The maximum recording time and the maximum time for one trip depend on the selected record interval as follows.

Record interval	Maximum recording time (total time of all trip data)	Maximum time for one trip	Maximum number of trips
1 second	35 hours	12 hours	250 trips
2 seconds	70 hours	24 hours	
5 seconds	175 hours	60 hours	

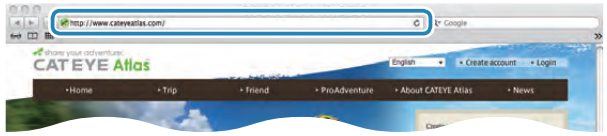
* The recording time and number of trips above are for reference only. These may be different according to the operating environment.
* For information on how to set the record interval, see “Changing the computer configuration” (page 27).
* When exceeding any of the conditions above, “**MEM FULL**” appears flashing on the screen, and no new data can be recorded. Transfer the trip data to CATEYE Sync™ to secure the storage volume of the computer. Only when exceeding the maximum time for one trip, the resetting operation (page 16) allows you to start the measurement as another trip.

Reviewing, editing and sharing the trip (What you can do with CATEYE Atlas™)

You can share the trip with your friends and other users, by editing the trip information uploaded to CATEYE Atlas™.

1 Access CATEYE Atlas™

Access the website “CATEYE Atlas™” from your browser (http://www.cateyeatlas.com).

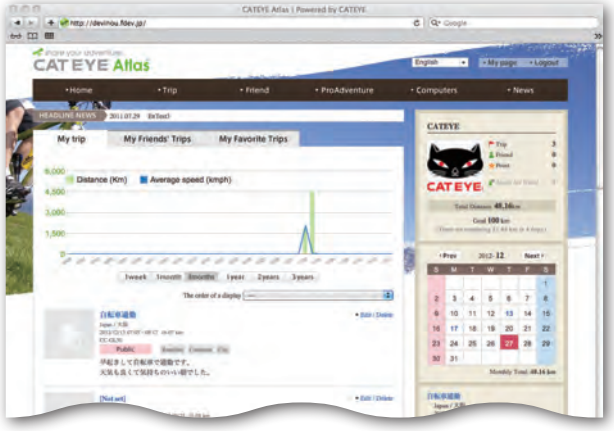


2 Click on [Login here]

* When you have not registered your membership, see “Membership registration to CATEYE Atlas™” (page 18).

3 Enter your e-mail address and password, and then click on [Login]

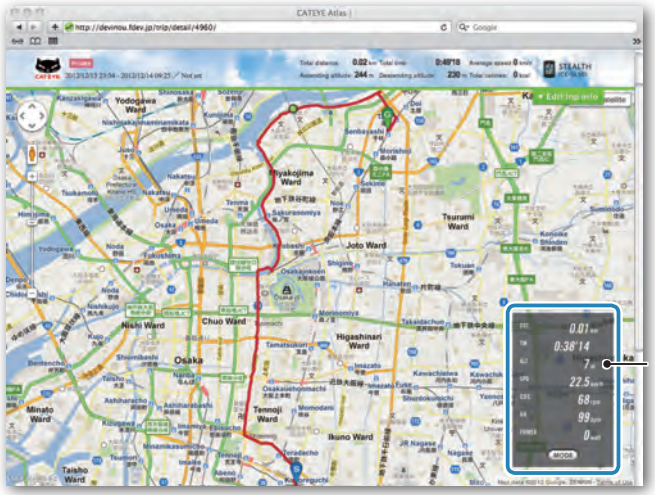
Enter correctly your e-mail address and password registered to login.
The “My Page” appears.



* On My Page, you can view the trip and trip data in the past and set the target trip distance in a certain period of time.

4 Click on the trip uploaded.

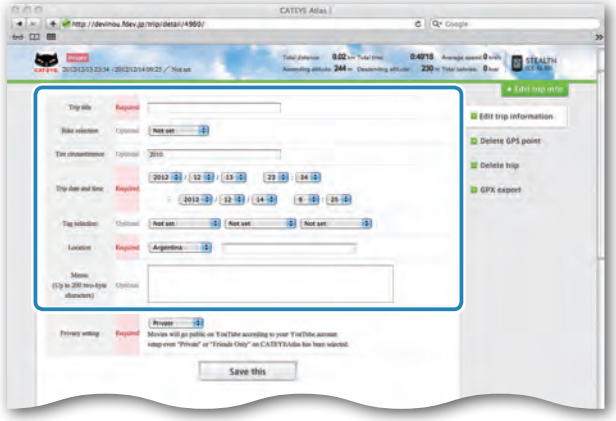
A map with the trip route with ride data shown.



* Clicking on **MODE** under the ride data changes the display items.

5 Click on [Edit trip info] at the upper right of the map.

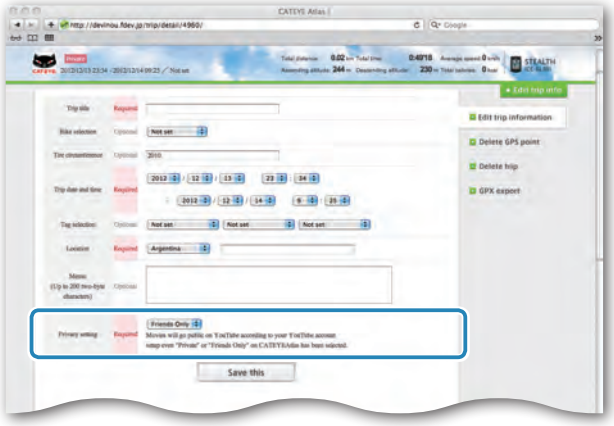
A screen for editing the trip information appears.
Enter information of the trip, including the title, bicycle and memo.



6 Select the privacy setting.

Select the privacy setting.

- **Private** : Can be viewed only with your account.
- **Public** : All users can view.
- **Friends only** : Only your friends can view.



7 Clicking on [Save this].

Now, editing the trip information is completed.

Deleting the GPS point

You can delete particular GPS points on the route.

❶ Click on [Delete GPS point] from the trip information editing screen.
The trip route appears on the map.

❷ Click on a start point for the route section you want to delete.
A section appears according to the cursor movement.

❸ Click on an end point of the section, covering the route you want to delete.
A confirmation message appears.

❹ Click on [Delete the GPS point selected].
The GPS points in the specified section are deleted.

Deleting the trip

You can delete the trip displayed.

❶ Click on [Delete trip] on the trip information editing screen.

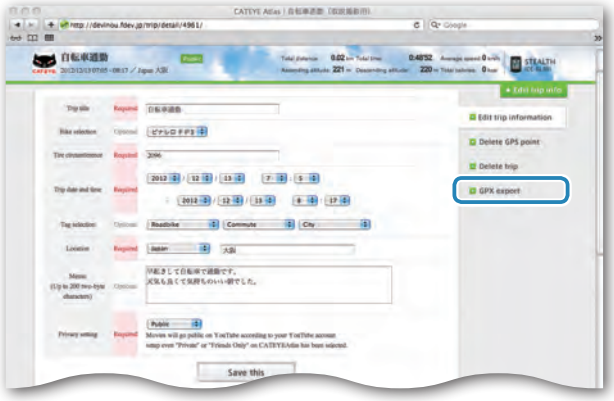
❷ Click on [Delete].

* The CATEYE Sync™ trip data on your PC is not affected.
* The deleted trip can be restored by re-uploading from CATEYE Sync™.

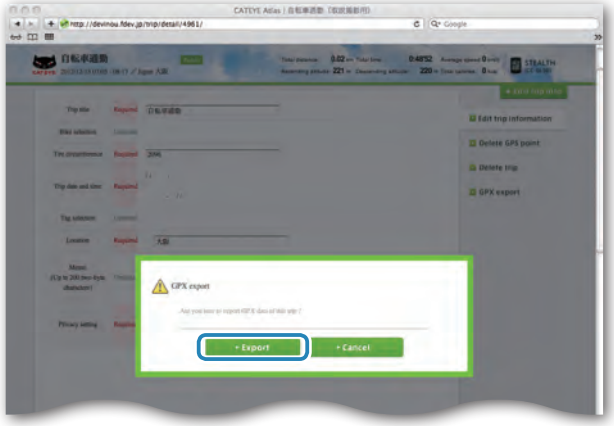
Exporting to a GPX file

Export a general-purpose GPS data file from the trip.
This can be used with other services, including Google Earth™.

❶ Click on [GPX export] on the trip information editing screen.
A confirmation message appears.



❷ Click on [Export].
A GPX file is downloaded.



Changing the computer configuration

You can change the computer configuration in two ways.

- Changing the setting with CATEYE Sync™ (below on this page)
  You can change the configuration easily from your PC application, with the computer connected to your PC with the cradle.

> ⚠ **Caution: Pairing the ANT+ sensor cannot be performed with CATEYE Sync™. For information on how to perform, see "Pairing the sensor" (page 32).**

- Changing the settings of the computer alone (page 29).
  This can be used when changing the setting with not using a PC.

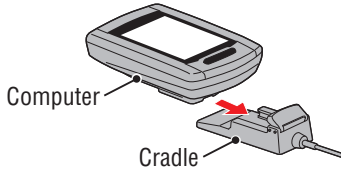
Changing the setting with CATEYE Sync™

Watch video (YouTube)

Click the button, then a browser will open and a video will be played back.

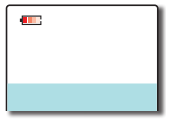
1 Set the computer to the cradle.

> ⚠ **Caution: Do not set wet computer to the cradle, for example after ride in the rain. It may cause short circuit and damage the computer or the data.**



2 Insert the USB plug into your PC.

Only (battery icon) is displayed on the computer screen.

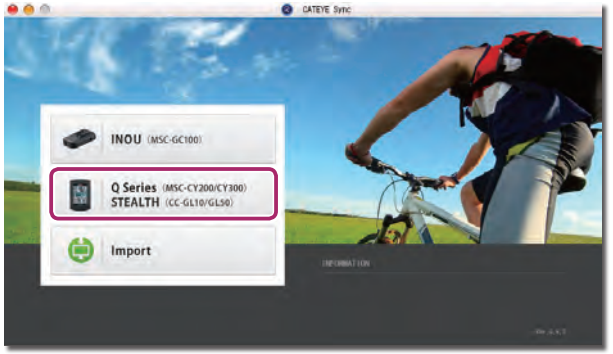


3 Start CATEYE Sync™.

Double-click on the shortcut [CATEYE Sync™] to start CATEYE Sync™.

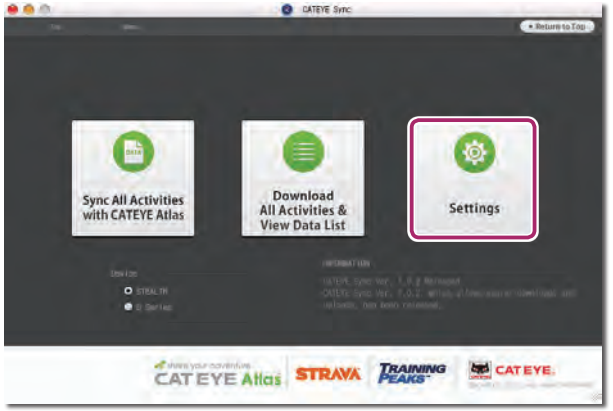
4 Click on [Q Series / STEALTH].

The menu screen appears.



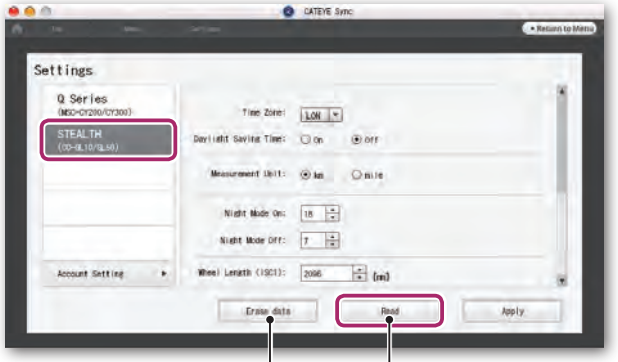
5 Click on [Settings].

The setting screen appears.



6 Click on [STEALTH] to change the settings.

Before changing the settings, click on [Read] to load the settings of the computer.



Delete the data recorded in the computer.

Read the current settings of the computer.

Change the settings according to the following procedure.

Setting items	Description
Time zone	Select the city code nearest from your current location. * For details, see “Time zone list” (page 11).
Daylight saving time	Select whether to use the daylight saving time. • **On** : Moves the clock 1 hour ahead. • **Off** : Displays in regular clock.
Speed unit	Select the speed unit (**km/h** or **m/h**).
Night-time setting	Set the time when the backlight lights up. • **Night-time setting ON :** Enter the start time when the backlight lights up. • **Night-time setting OFF :** Enter the end time when the backlight lights off. (Example) When lighting up from 7:00 pm to 6:00 am Night-time setting ON : 19 Night-time setting OFF : 6 * When you do not want to turn on the backlight throughout the day, set the same value for both “Night-time setting ON” and “Night-time setting OFF”.
Tire circumference	**This setting is required when you pair the ANT+ speed sensor or speed/cadence (ISC) sensor.** Assign the tire circumference to the speed sensor or speed/cadence sensor whichever you pair. (Setting range: 0100 to 3999 mm) • **ISC1 (ISC:1)** : Speed/cadence sensor 1 • **SPD1 (SP:1)** : Speed sensor 1 • **ISC2 (ISC:2)** : Speed/cadence sensor 2 • **SPD2 (SP:2)** : Speed sensor 2 * As default, it is set to 2096. * For the sensor without pairing, the tire circumference cannot be set even if it is entered. * **ISC2** and **SPD2** are used when a computer is commonly used for two bicycles. For details, see “Pairing the sensor” (page 32).
Total distance	You can enter the start value of the total distance, and add the trip distance to it. (Setting range: 00000 to 99999) * This can be used when you renew and/or reset the computer. * Enter the total distance in integer number only.
Sampling interval	Set the record interval of the measurement data. * The maximum recording time (total time of all trip data) and the maximum time for one trip depend on the interval selected. • **1s** (at intervals of 1 second) : 35 hours / 12 hours • **2s** (at intervals of 2 seconds) : 70 hours / 24 hours • **5s** (at intervals of 5 seconds) : 175 hours / 60 hours
Clock display format	Select the display format of “**12h**” (12 hours display) or “**24h**” (24 hours display). * Date and clock are acquired from GPS signal; therefore, it is not necessary to enter them.

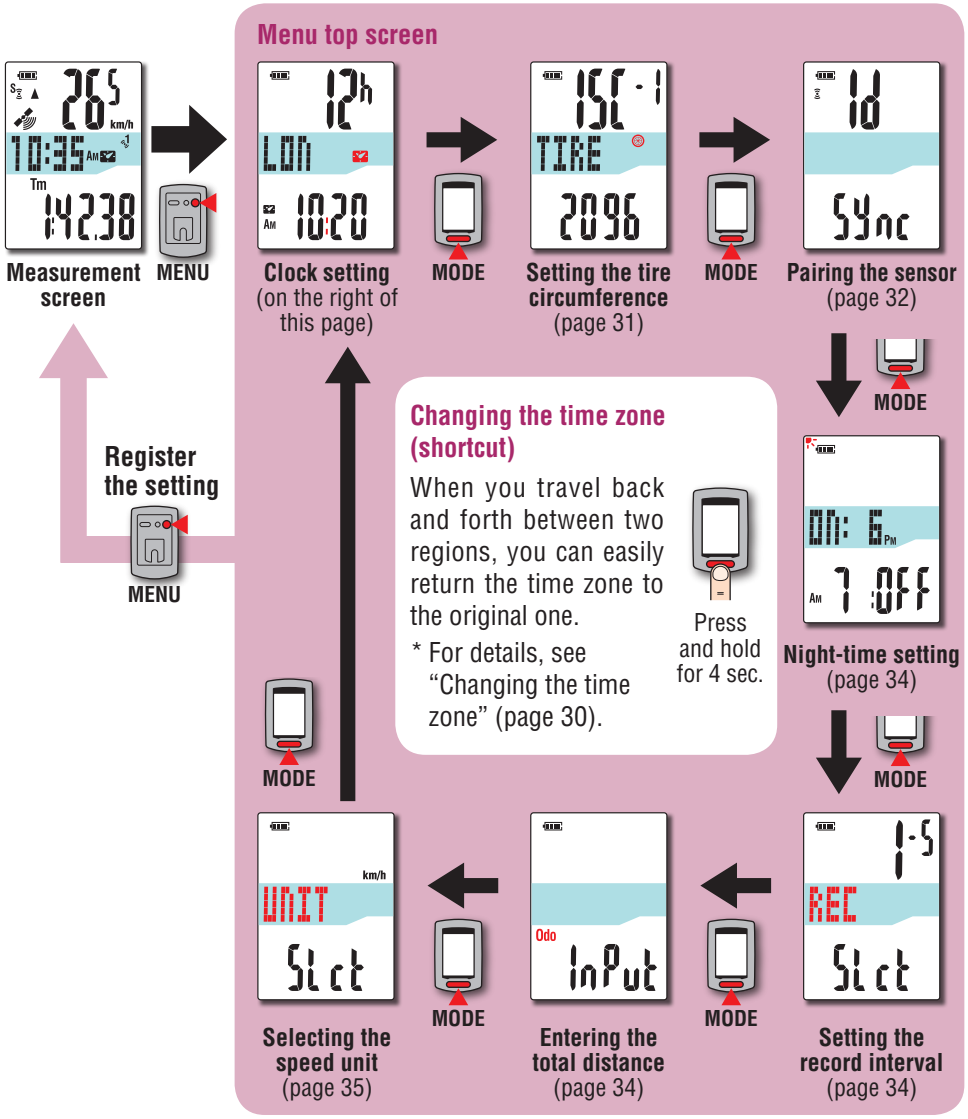
7 Click on [Apply].

The changes are reflected to the computer.
Remove the computer from the cradle. Now, changing the computer configuration is completed.

Changing the settings of the computer alone

Pressing the **MENU** button with the measurement screen displayed changes to the menu screen. Various settings can be changed on the menu screen.

* After you change the setting, be sure to press the **MENU** button to register it.
* Leaving the menu screen without any operation for 1 minute returns to the measurement screen.

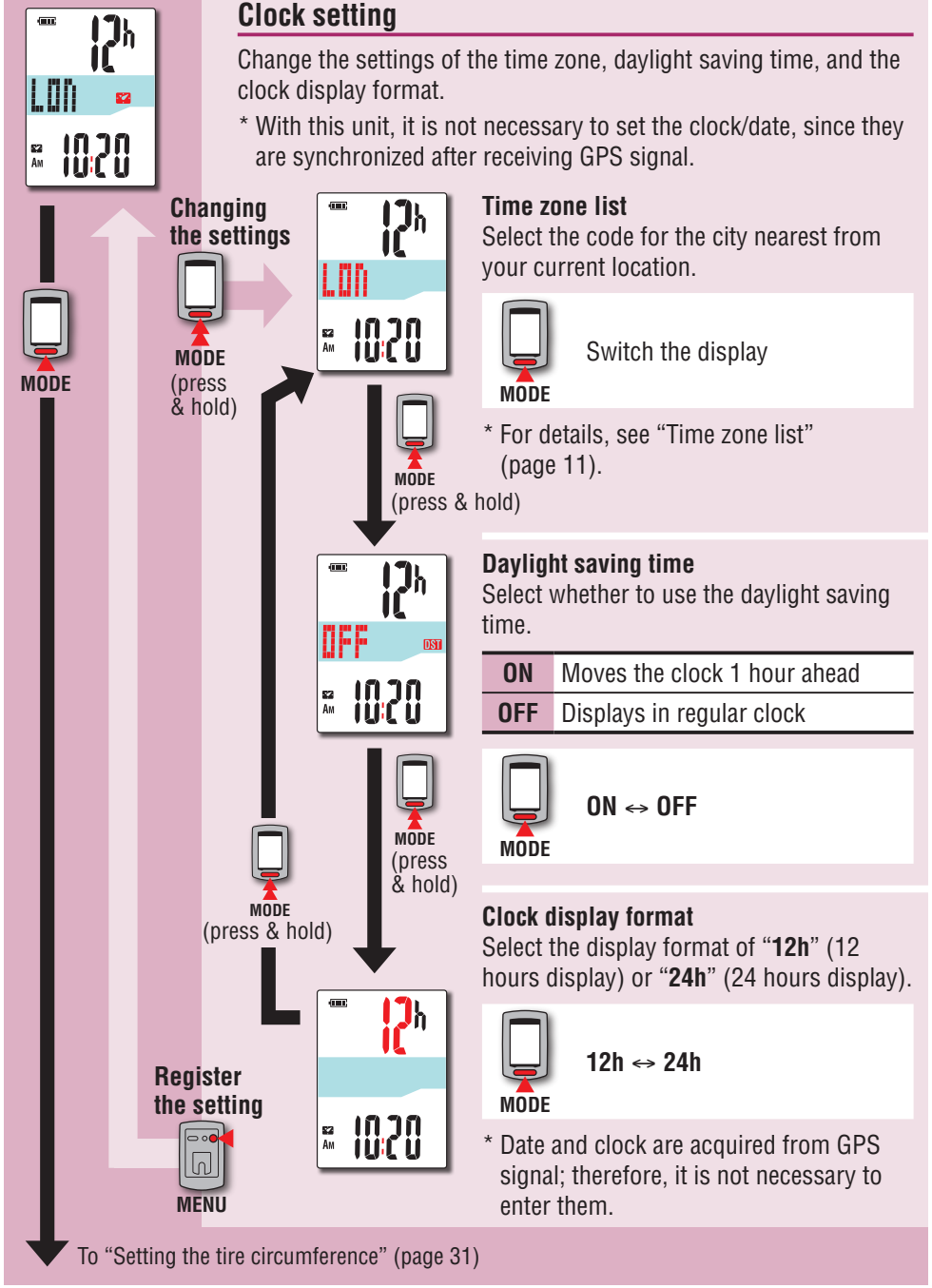

Menu top screen
Measurement screen
MENU
Clock setting (on the right of this page)
MODE
Setting the tire circumference (page 31)
MODE
Pairing the sensor (page 32)
MODE
Night-time setting (page 34)
MODE
Setting the record interval (page 34)
MODE
Entering the total distance (page 34)
MODE
Selecting the speed unit (page 35)
MODE
Register the setting
MENU
Changing the time zone (shortcut)
When you travel back and forth between two regions, you can easily return the time zone to the original one.
* For details, see "Changing the time zone" (page 30).
Press and hold for 4 sec.

From "Selecting the speed unit" (page 35)

Clock setting

Change the settings of the time zone, daylight saving time, and the clock display format.

* With this unit, it is not necessary to set the clock/date, since they are synchronized after receiving GPS signal.



Time zone list

Select the code for the city nearest from your current location.

MODE — Switch the display

* For details, see "Time zone list" (page 11).

Daylight saving time

Select whether to use the daylight saving time.

ON	Moves the clock 1 hour ahead
OFF	Displays in regular clock

MODE — **ON ↔ OFF**

Clock display format

Select the display format of "**12h**" (12 hours display) or "**24h**" (24 hours display).

MODE — **12h ↔ 24h**

* Date and clock are acquired from GPS signal; therefore, it is not necessary to enter them.

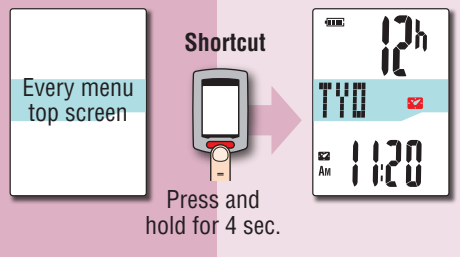
To "Setting the tire circumference" (page 31)

Changing the time zone (shortcut)

Holding down the **MODE** button for 4 seconds with the menu top screen displayed returns the time zone to the previous one. Holding down it again returns to the original time zone.

Example: Change the time zone

Current setting	**NYC** (New York)
Previous setting	**TYO** (Tokyo)

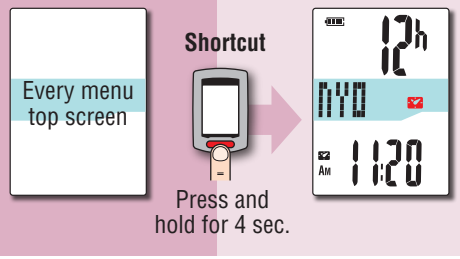


Register the setting

The time zone is changed from **NYC** (New York) to **TYO** (Tokyo) of the previous setting.

Change the time zone again

Current setting	**TYO** (Tokyo)
Setting before the change	**NYC** (New York)



Register the setting

The time zone is changed from **TYO** (Tokyo) to **NYC** (New York) before the change.

* When you travel back and forth between two cities having different time zone, you can easily return it to the original time zone by performing the shortcut operation, even after changing the time zone in the second city.
* The time zone stored for the shortcut is the previous setting only.

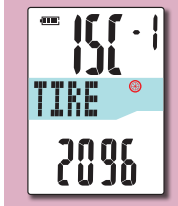
Time zone list

City code	City name	Time difference
LON	London	0
PAR	Paris	+1
ATH	Athens	+2
MOW	Moscow	+3
THR	Tehran	+3.5
DXB	Dubai	+4
KBL	Kabul	+4.5
KHI	Karachi	+5
DEL	Delhi	+5.5
DAC	Dhaka	+6
RGN	Yangon	+6.5
BKK	Bangkok	+7
HKG	Hong Kong	+8
TYO	Tokyo	+9

City code	City name	Time difference
DRW	Darwin	+9.5
SYD	Sydney	+10
NOU	Noumea	+11
WLG	Wellington	+12
PPG	Pago Pago	-11
HNL	Honolulu	-10
ANC	Anchorage	-9
LAX	Los Angeles	-8
DEN	Denver	-7
CHI	Chicago	-6
NYC	New York	-5
CCS	Caracas	-4
RIO	Rio de Janeiro	-3

* For details, refer to the map on page 11.

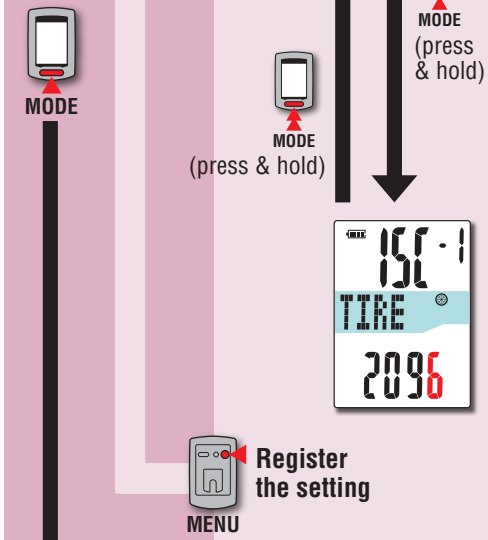
From “Clock setting” (page 29)



Setting the tire circumference

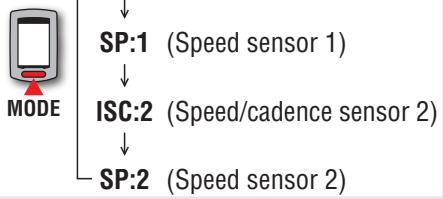
This setting is required when you performed pairing with the ANT+ speed sensor or speed/cadence (ISC) sensor.

Assign the tire circumference to the speed sensor or speed/cadence sensor for pairing.



Selecting the sensor

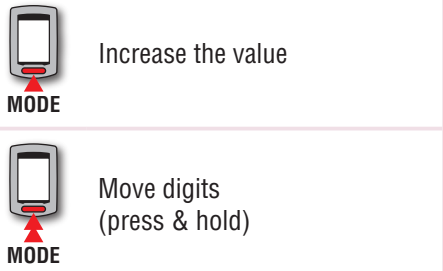
Select the sensor for which to set the tire circumference.



* The sensor in use appears first.
* **ISC:2** and **SP:2** are used when a computer is used for two different bicycles. For details, see “Pairing the sensor” (page 32).

Entering the tire circumference

Setting range: 0100 - 3999 mm



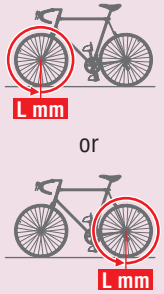
Tire circumference

You can find the tire circumference (L) of your tire size in the chart below, or actually measure the tire circumference (L) of your bicycle.

How to measure the tire circumference (L)

For the most accurate measurement, do a wheel roll out. With the tires under proper pressure, place the valve stem at the bottom. Mark the spot on the floor and with the rider’s weight on the bike, roll exactly one wheel revolution in a straight line (until the valve comes around again to the bottom). Mark where the valve stem is and measure the distance.

* Measure the tire to which the sensor is installed.



Tire circumference reference table

* Generally, the tire size or ETRTO is indicated on the side of the tire.

ETRTO	Tire size	L (mm)
47-203	12x1.75	935
54-203	12x1.95	940
40-254	14x1.50	1020
47-254	14x1.75	1055
40-305	16x1.50	1185
47-305	16x1.75	1195
54-305	16x2.00	1245
28-349	16x1-1/8	1290
37-349	16x1-3/8	1300
32-369	17x1-1/4(369)	1340
40-355	18x1.50	1340
47-355	18x1.75	1350
32-406	20x1.25	1450
35-406	20x1.35	1460
40-406	20x1.50	1490
47-406	20x1.75	1515
50-406	20x1.95	1565
28-451	20x1-1/8	1545
37-451	20x1-3/8	1615
37-501	22x1-3/8	1770
40-501	22x1-1/2	1785
47-507	24x1.75	1890
50-507	24x2.00	1925
54-507	24x2.125	1965

ETRTO	Tire size	L (mm)
25-520	24x1(520)	1753
	24x3/4 Tubular	1785
28-540	24x1-1/8	1795
32-540	24x1-1/4	1905
25-559	26x1(559)	1913
32-559	26x1.25	1950
37-559	26x1.40	2005
40-559	26x1.50	2010
47-559	26x1.75	2023
50-559	26x1.95	2050
54-559	26x2.10	2068
57-559	26x2.125	2070
58-559	26x2.35	2083
75-559	26x3.00	2170
28-590	26x1-1/8	1970
37-590	26x1-3/8	2068
37-584	26x1-1/2	2100
	650C Tubular 26x7/8	1920
20-571	650x20C	1938
23-571	650x23C	1944
25-571	650x25C 26x1(571)	1952
40-590	650x38A	2125

ETRTO	Tire size	L (mm)
40-584	650x38B	2105
25-630	27x1(630)	2145
28-630	27x1-1/8	2155
32-630	27x1-1/4	2161
37-630	27x1-3/8	2169
18-622	700x18C	2070
19-622	700x19C	2080
20-622	700x20C	2086
23-622	**700x23C**	**2096**
25-622	700x25C	2105
28-622	700x28C	2136
30-622	700x30C	2146
32-622	700x32C	2155
	700C Tubular	2130
35-622	700x35C	2168
38-622	700x38C	2180
40-622	700x40C	2200
42-622	700x42C	2224
44-622	700x44C	2235
45-622	700x45C	2242
47-622	700x47C	2268
54-622	29x2.1	2288
60-622	29x2.3	2326

To “Pairing the sensor” (page 32)

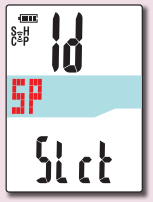
From “Setting the tire circumference” (page 31)

Pairing the sensor (searching the sensor ID)

This setting is required when you have an ANT+ sensor.

Changing the settings

MODE
(press & hold)



MODE

MODE
(press & hold)

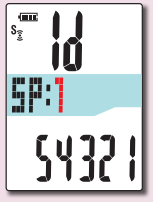
Selecting the sensor

Select the sensor to be paired.

MODE

→ **SP** (Speed sensor)
↓
ISC * (Speed/cadence sensor)
↓
CD (Cadence sensor)
↓
HR (Heart rate sensor)
↓
PW (Power sensor)

* When using the CATEYE speed/cadence sensor (ISC-11), select [**ISC**] to perform paring.



Selecting the sensor number

2 sensor IDs per sensor type can be registered into the computer.

MODE

1 (1 sensor)↔ **2** (2 sensor)

* The computer recognizes two bicycles automatically by pairing the sensor installed to the second bicycle while selecting **2** (second bicycle).
* The next step differs depending on whether automatic search or manual ID number entry is selected. Go to the appropriate step according to your selection.

Continue (page 33)

To add or reset the ANT+ sensor, perform pairing in the following procedure.
This unit has 2 different methods for pairing.

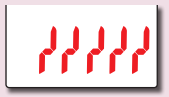
How to search the sensor ID	Description
Automatic search	The computer completes pairing by receiving the signal sent from the sensor. * Generally, use this method for pairing.
Manual ID number entry	When the sensor ID number is known, you can perform pairing by entering the number. * Use this method for pairing, when there are two or more ANT+ sensors, such as at a race site, and automatic search cannot be done.

To “Night-time setting” (page 34)

MODE

Pairing the sensor (continued)

MODE (press & hold)



Searching is started

MODE (press & hold)

Sensor signal

Searching the sensor ID is completed

In the case of automatic search

Press and hold the **MODE** button, then the lower display will be changed, and automatic search will be started. Send the sensor signal with the automatic search screen displayed.

* When another ANT+ sensor is nearby, send the sensor signal of the sensor to be searched, and then press and hold the **MODE** button. It can be easier to pair with the sensor you want.

Manual ID number entry

MODE

Press the **MODE** button within 3 seconds after automatic search starts, then the display will be changed to the ID number entry screen.

Entering the ID number

Pressing the **MODE** button changes the value, and pressing and holding the **MODE** button moves to the next digit.

Setting range: 00001 – 65535

MODE Increase the value

MODE Move digits (press & hold)

The ID number will appear on the display. Note the ID number for your convenience, which is specific to the sensor.

* Each sensor sends the sensor signal in response to the following operations.

Sensor type		Method
SP	Speed sensor	Move the magnet close to the sensor zone (at a distance of less than 3 mm)
ISC	Speed/cadence sensor	
CD	Cadence sensor	
HR	Heart rate sensor	Wear the heart rate sensor
PW	Power sensor	Ride the bicycle

* The computer enters the search mode for 5 minutes after automatic search is started. Send the sensor signal in this period.
* Pressing and holding the **MODE** button in the search mode cancels automatic search. It is canceled automatically when the sensor signal cannot be received in the search mode.

MENU **Register the setting**

MENU **Register the setting**

To “Night-time setting” (page 34)

From “Pairing the sensor” (page 32)

Night-time setting

Set the time when the backlight lights up.

* When you do not want to turn on the backlight throughout the day, set the start time and end time to the same hour.

Changing the settings

MODE (press & hold)

Start time

Enter the start time when the backlight lights up.

MODE — Increase the value

MODE (press & hold)

MODE (press & hold)

End time

Enter the end time when the backlight lights off.

MODE — Increase the value

MODE

Register the setting

MENU

MODE

To “Setting the record interval”

From “Night-time setting”

Setting the record interval

Set the second-scale interval to record the measurement data.

* The maximum recording time / maximum time for one trip that can be recorded in the computer depends on the selected interval.

MODE

Changing the settings

MODE (press & hold)

Record interval	Maximum recording time (total time of all trip data)	Maximum time for one trip
1-S (1 second)	35 hours	12 hours
2-S (2 seconds)	70 hours	24 hours
5-S (5 seconds)	175 hours	60 hours

Register the setting

MENU

MODE — 1-S → 2-S → 5-S

Entering the total distance

You can enter the start value of the total distance, and add the trip distance to it. Use this function when you renew and/or reset your unit.

* Enter the total distance in integer number only.

MODE

Changing the settings

MODE (press & hold)

(00000 — 99999)

MODE — Increase the value

MODE — Move digits (press & hold)

Register the setting

MENU

To “Selecting the speed unit” (page 35)

From “Entering the total distance” (page 34)

Selecting the speed unit

Select the speed unit (km/h or m/h).

Changing the settings

MODE
(press & hold)

MODE

MENU

Register the setting

MODE

km/h ↔ m/h

To “Clock setting” (page 29)

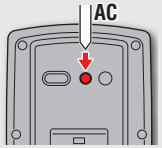
When the operation is unstable

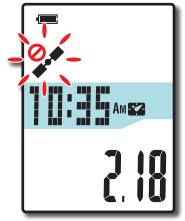
When the computer displays incorrectly, perform the restarting operation to stabilize the operation.

* Performing the restarting operation deletes any records under measurement.
* We recommend that you perform the resetting operation to generate the trip data, before performing the restarting operation.

Restarting operation

Press the **AC** button on the back of the computer. All screen items will light up for 2 seconds, and the unit will change to the GPS search screen.





GPS search screen

Data to be stored / data to be deleted

Data to be stored / deleted upon the restarting operation are as follows.

Data to be stored	Data to be deleted
Speed unit	Data under measurement (elapsed time, trip distance, trip distance-2, average speed, maximum speed, and GPS route information)
Clock setting (time zone, previous time zone, daylight saving time, and display format)	
Night-time setting (start time and end time)	
Record interval	
Total distance (*1)	
Trip data generated upon the resetting operation	

*1 Once you perform the restarting operation before the resetting operation after measurement, the distance is not added to the total distance.

Troubleshooting

The following troubles are not due to failure.
See also “FAQ” in CATEYE Atlas™ (web) (http://www.cateyeatlas.com/qa/).

Troubles related to the computer

Trouble	Check Items	Remedy
When the power is turned on, (battery icon) flashes, and then no display appears.	–	Remaining battery capacity is nearly zero. Charge the computer according to the procedure in “How to charge” (page 7).
The power is turned off while riding.	–	The power is automatically turned off in 10 minutes if no GPS signal or speed signal is received. (Auto power off)
No display appears when pressing and holding the ⏻ button for 2 seconds.	Is the battery for the computer empty?	Charge the computer according to the procedure in “How to charge” (page 7).
Incorrect data appear.	–	Follow the procedure in “When the operation is unstable” (page 35).
Measurement cannot be performed. (S or C does not flash)	When the ANT+ speed sensor or speed/cadence (ISC) sensor is used	
	Did you perform pairing with the speed sensor or speed/cadence (ISC) sensor used?	Perform pairing (page 32).
	Is the condition for mounting the speed sensor or speed/cadence (ISC) sensor cleared?	Mount the sensor correctly by referring to the instruction manual supplied with your sensor.
	Is the battery for the speed sensor or speed/cadence (ISC) sensor used up?	Replace with new batteries.

Trouble	Check Items	Remedy
Measurement cannot be performed (S does not flash, but flashes on the display).	When the ANT+ speed sensor or speed/cadence (ISC) sensor is not used	
	Is it immediately after turning on the power?	It may take about 2 to 3 minutes to acquire the positional information after receiving GPS signal.
	Is the location or weather suitable for receiving the GPS signal?	GPS signal may not be received, thus the unit may stop measurement or may not display appropriate measurements in the following locations or environments. • In a tunnel, underground and building, between high-rise buildings, under an elevated structure and arcade, etc. • In bad weather (snow, rain, etc.) • Near a high-voltage line or a mobile telephone relay station. • The computer display does not face upward.
	Is the unit installed so that the computer display (antenna) faces to the sky?	To receive GPS signal effectively, install the unit so that the computer display faces to the sky.
The measurement data is wrong.	–	The unit may stop measurement or may display different values from the actual one depending on the receiving status, since measurement is based on the GPS when the speed sensor or speed/cadence (ISC) sensor is not used.

Trouble	Check Items	Remedy
MEM FULL flashes.	Does the maximum recording time or the number of trips exceed the upper limit? * For details, see “Record interval and capacity limit” (page 23)	Connect the computer to your PC to upload the trip data (page 20). All the trip data transferred to your PC will be deleted from the computer, and new data will be able to be recorded.
	Does the maximum time for one trip exceed the upper limit? * For details, see “Record interval and capacity limit” (page 23)	Perform the resetting operation (page 16) to stop the current trip. Then, you can record as another trip.
The backlight does not light up even at the preset hour.	Are the start time and end time set to the same hour?	The backlight does not light up when the start time and end time are set to the same hour. For information on how to set the start/end time, see “Changing the computer configuration” (page 27).
The backlight lights up during the daytime.	Is the start time of the night-time set correctly?	For information on how to set the start time, see “Changing the computer configuration” (page 27).

Troubles related to the ANT+ sensor

Refer to the following information when the optional or commercial ANT+ sensor is used.

* Pairing with the computer is required in order to use the ANT+ sensor. For details, see “Pairing the sensor” (page 32).
* When a commercial ANT+ sensor is used, also refer to the instruction manual supplied with your sensor.

Trouble	Check Items	Remedy
The heart rate cannot be measured (H does not flash).	Did you perform pairing with the heart rate sensor?	Perform pairing (page 32).
	Is the electrode pad detached from your body?	Wear the electrode pad appropriately so that it is in close contact with the body.
	Is your skin dry?	Moisten the electrode pad a little.
	Is the electrode pad overly worn and damaged after long use?	Replace with a new one.
	Is the battery for the heart rate sensor used up?	Replace with new batteries.
The heart rate measurement is not constant (measurement is performd at times, or reset to 0).	Is the heart rate sensor attached correctly?	Attach the heart rate sensor in the correct position by referring to the relevant instruction manual.
The power cannot be measured (P does not flash).	Did you perform pairing with the power sensor used?	Perform pairing (page 32).
	Is the condition for mounting the power sensor cleared?	Mount the power sensor correctly by referring to the relevant instruction manual.
	Is the battery for the power sensor used up?	Replace with new batteries.

Trouble	Check Items	Remedy
The power display is not accurate.	–	Perform calibration of the power sensor (page 17). * Continuous use of the power sensor may cause a slight drift in unloaded condition. Calibrate it periodically to correct the drift.

Maintenance

To clean the computer or accessories, use diluted neutral detergent on a soft cloth, and wipe it off with a dry cloth.

How to replace the battery

When the operating time decreases significantly, the battery life is close to an end.
Please contact CatEye local distributor listed on our website www.cateye.com or CatEye for replacing battery.

⚠ **Caution: This computer is a precision device. Never disassemble it.**

How to dispose the computer

Remove the screws (x 6) on the back of the computer using a Phillips screwdriver, remove the rechargeable battery built-in, and then dispose the computer.

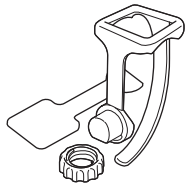
⚠ **Caution:**

- **The used battery should be disposed of properly according to local regulations.**
- **Do not disassemble the unit except when you dispose it.**
- **Be sure to use up the rechargeable batteries.**
- **Keep the removed batteries out of baby's reach. If a child swallows a battery, consult a doctor immediately.**

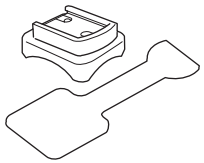
Optional accessories

Standard accessories

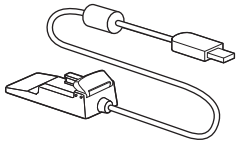
1600280N
Bracket band



1602193
Bracket

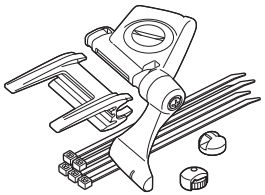


1603790
Cradle
(IF-CC01)

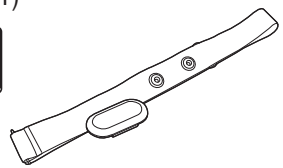


Optional accessories

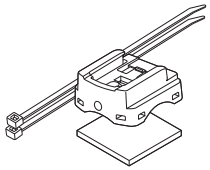
1603750
Speed sensor (speed/cadence)
(ISC-11)



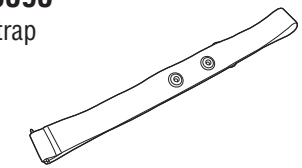
1603760
Heart rate sensor
(HR-11)



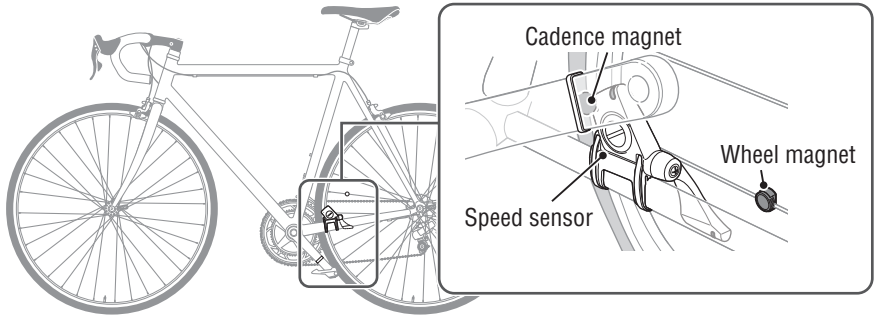
1602980
Nylon tie bracket



1603595
HR Strap



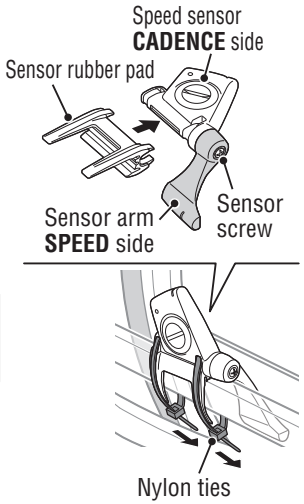
How to install the speed/cadence sensor (ISC-11)



Watch video (YouTube)

Click the button, then a browser will open and a video will be played back.

1 Temporarily secure the speed sensor

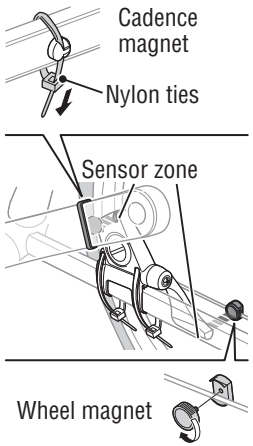


❶ Loosen the sensor screw on the speed sensor using a Phillips screwdriver to check that the sensor arm moves. Do not completely remove the sensor screw.

❷ Attach the sensor rubber pad to the speed sensor, locate the speed sensor on the left chain stay as shown in the figure above, and temporarily secure it with the nylon ties.

⚠ **Caution: Do not tighten the nylon ties completely at this stage. Once a nylon tie is tightened, it cannot be pulled out.**

1 Temporarily secure the magnet

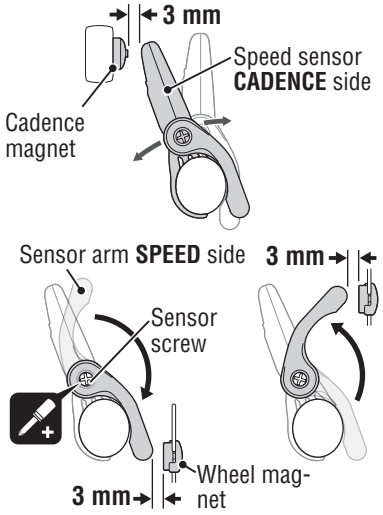


❶ Temporarily secure the cadence magnet inside the crank with nylon ties, so that it faces the sensor zone on the **CADENCE** side.

❷ Turn the sensor arm, and temporarily secure the wheel magnet to the spoke that faces the sensor zone on the **SPEED** side.

* When the speed sensor is not positioned appropriately in respect to the two magnets (of **CADENCE** and **SPEED**), move the speed sensor back and forth so that it is positioned properly. After you move the speed sensor, adjust the position so that the two magnets face the relevant sensor zone.

2 Adjust the distance to the magnet



❶ Tilt the speed sensor so that the distance between the cadence magnet and the **CADENCE** side of the speed sensor is about 3 mm, and firmly secure it with the nylon ties.

❷ Turn and adjust the sensor arm so that the distance between the wheel magnet and the sensor arm is about 3 mm, and firmly tighten the sensor screw.

3 Securing various parts

Firmly tighten the nylon ties, sensor screw and magnet of the speed sensor, and check for any loosening.

* For steel axle pedals, the cadence magnet can be magnetically secured on the pedal axle. Make sure to remove the double-sided tape from the magnet when doing this.

Cut extra length of the nylon tie with scissors.

How to install the heart rate sensor (HR-11)

Heart rate is measured when the heart rate sensor is worn on the chest.

⚠ Warning!!! : This product must NOT be used by those who have a pacemaker.

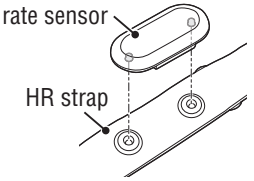
- To avoid measurement errors, it is recommended to moisten the electrode pads with water.
- If your skin is sensitive, the electrode pad may be moistened with water and worn on a thin undershirt.
- Chest hair may interfere with the measurement.

Watch video (YouTube)

Click the button, then a browser will open and a video will be played back.

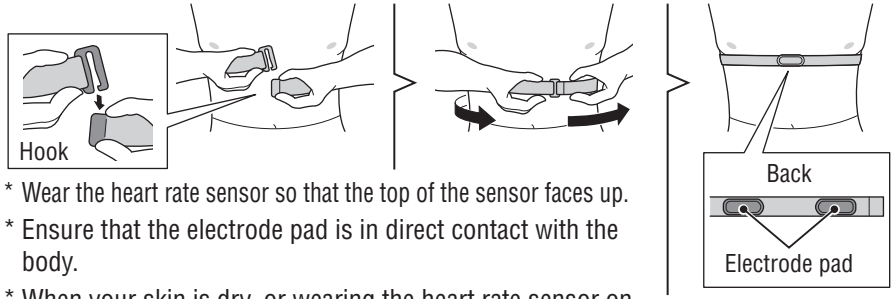
1 Attach the heart rate sensor to the HR strap.

Push it in until it clicks.



2 Insert the HR strap hook to the other end of the strap.

Wear the heart rate sensor with the HR strap, and adjust the length of the HR strap to fit your chest size (under bust). Fastening the strap too tightly may cause discomfort.



* Wear the heart rate sensor so that the top of the sensor faces up.

* Ensure that the electrode pad is in direct contact with the body.

* When your skin is dry, or wearing the heart rate sensor on top of your undershirt may produce measurement errors. To avoid errors, moisten the electrode pad.

Specification

Measurement function	Upper display	Current speed	0.0 (3.0) – 105.9 km/h [0.0 (2.0) – 65.9 m/h]
	Middle display	Clock	0:00 – 23:59 [AM1:00 – PM12:59] (Both 12 and 24-hour modes can be selected) (Automatic adjustment using GPS)
		Current power (*1)	0 – 9999 watt
	Lower display	Elapsed Time	0:00'00" – 9:59'59"
		Heart rate (*1)	0 (30) – 199 bpm
		Cadence (*1)	0 (20) – 199 rpm
		Trip Distance	0.00 – 999.99 km [mile]
		Trip Distance-2	0.00 – 999.99 / 1000.0 – 9999.9 km [mile]
		Average Speed	0.0 – 105.9 km/h [0.0 – 65.9 m/h]
		Maximum Speed	0.0 (3.0) – 105.9 km/h [0.0 (2.0) – 65.9 m/h]
		Total Distance	0.0 – 9999.9 / 10000 – 99999 km[mile]
		Date	1.1 – 12.31 (Automatic adjustment using GPS)
Battery	Lithium-ion rechargeable battery		
Charge and communication	USB cradle		
Standard charging time	Approx. 5 hours (USB2.0)		
Standard operating time	Approx. 10 hours		
Recharge/discharge number of times	About 300 times (until the rated capacity drops to 70%)		
Controller	Microcomputer (crystal controlled oscillator)		
Display	Liquid crystal display (EL backlight: Lights up always during the night-time)		
Sensor signal transmission system	ANT+		
Working temperature	0 °F - 104 °F (0 °C - 40 °C) This product will not display appropriately when exceeding the Working Temperature range. Slow response or black LCD at lower or higher temperature may happen respectively.)		
Dimensions/weight	2-23/32" x 1-49/64" x 7/8" (69 x 45 x 22.4 mm) / 1.76 oz (50 g)		

*1: The optional or commercial ANT+ sensor is required for measurement.

* The specifications and design are subject to change without notice.

Limited warranty

2-year Warranty: Computer only

(Deterioration of the battery is excluded.)

CatEye cycle computers are warranted to be free of defects from materials and workmanship for a period of two years from original purchase. If the product fails to work due to normal use, CatEye will repair or replace the defect at no charge. Service must be performed by CatEye or an authorized retailer. To return the product, pack it carefully and enclose the warranty certificate (proof of purchase) with instruction for repair. Please write or type your name and address clearly on the warranty certificate. Insurance, handling and transportation charges to CatEye shall be borne by person desiring service.
For UK and REPUBLIC OF IRELAND consumers, please return to the place of purchase. This does not affect your statutory rights.

Please register your CatEye product on the website.
https://www.cateye.com/en/support/regist/

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